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UNIVERSITY OF ALBERTA

ONTOLOGIC JOY

By

Joanna Dabrowski

Ⓒ

A thesis submitted to the
Faculty of Graduate Studies and Research
in partial fulfillment of the requirements of the degree of
Doctor of Philosophy

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

Edmonton, Alberta
Spring 1993

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THE UNIVERSITY OF ALBERTA

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ABSTRACT

The purpose of the research was to test the validity of the construct of avoidance-approach of ontologic joy. This construct was delineated for special study from the theory of ontologic joy, which is based on the more general theory of positive disintegration (Dabrowski, 1964, 1967, 1970, 1972, 1992; Dabrowski & Dabrowski, 1974; Dabrowski, Kawczak, & Sochanska, 1973). The construction of an Avoidance of Joy Scale, within the framework of the randomly parallel tests model of classical measurement theory, constituted the main objective of the research. Major findings were as follows: (1) Estimates of the internal reliability indices were high (40 items = .89; 20 items = .82) averaged across the developmental sample (N = 100 females and 100 males, median age = 27.0 years), a split-sample (N = 88 females, median age = 26.5 years), and a cross-referent sample (N = 17 females and 14 males, median age = 23.0 years); (2) the test-retest coefficients of reliability, calculated on an independent sample (N = 19 females and 8 male, median age = 22.0 years) were also respectable (40 items = .65; 20 items = .66); (3) overlap of scores on the Avoidance of Joy Scale(s) with measures of stylistic response bias, such as satiation, social desirability, and acquiescence were minimal; (4) separate principal-component analyses of each version of the scale indicated a clear and distinct split of avoidance and approach-worded items within a two-factor solution rotated to Varimax criterion; (5) all four congruency coefficients pertaining to Factors I and II (40 items = .94 and .87; 20 items = .96 and .89), which were derived from two Procrustes analyses (each based on 4,999,999 permutations of the Hypothesis Matrix), were at the maximum probability level (p = .0000002), confirming the optimality of a two-factor structure for both versions of the scale; and (6) findings from several studies on a cross-section of topical interests consistently supported all additional hypotheses derived from the theory of ontologic joy regarding content, criterion-related, and construct validity. Implications of the results of the investigation were discussed within the context of the existing literature on the phenomenon of joy. Limitations of the research were described, and a number of suggestions for subsequent research were outlined.

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CHAPTER I

OVERVIEW

1.1 Introduction

This section provides an overview of the purpose, design, methodology, and general outline of the research investigation. The matter of a definition of the phenomenon of joy is discussed and seven problems in the literature on the phenomenon of joy are presented. A requirement for a suitable instrument to measure avoidance-approach tendencies toward the phenomenon of joy is indicated, and a strategy to construct a relevant scale with respectable psychometric properties is briefly described. A plan of investigation and the scope of the research are provided.

1.2 The Study of Joy

The selection of the phenomenon of joy as the general topic area of study is rationalized in light of the paucity of knowledge available about the phenomenon of joy, despite the clear interest of most people for positive experiences across their lifetimes. Individuals, however, go about their endeavours regarding positive experiences differently, depending on their dispositions on the experiences they have had that are common in their culture, and on their experiences that are unique to themselves.

A person has a particular psychological (psychogenic) involvement with a phenomenon to the extent that she or he is interested and finds the area of functioning to be salient to her or his own experience (Liebert & Spiegler, 1982). One component of this involvement revolves around the initiation or approach tendencies. But, avoidance tendencies may also be the dominant aspect of a person's relationship with any phenomenon. These two tendencies are well referenced in psychology (Eysenck & Wurzburg, 1972), and although agreement on exactly how to conceptualize them has not yet been reached, some aspect of the approach-avoidance element has been noted by virtually every personality theorist (Liebert & Spiegler, 1982). Further, the use of the elements of approach and avoidance tendencies has a wide understanding in other topic domains in psychology (Eysenck & Wurzburg, 1972), as well as in the descriptions of existential thought about the behavioral mechanisms employed by humans (Kaufmann, 1960). In addition, the idea of approach-avoidance tendencies serves as one basis for intergration of personality conceptualized in terms of needs: cf. Meehl, 1992: "Getting away from versus seeking a certain state of affairs" (p. 431), or in terms of state-variables such as "Skinner's negative and positive reinforcers and includes the empirical fact of correlated 'emotional' respondents" (p. 431).

1.3 Statement of Objectives

In light of the basic relevance of the paradigm of approach-avoidance tendencies across the spectrum of literature pertaining to the phenomenon of joy, coupled to the clear need for more knowledge in the area of positive dimensions to human existence, the purpose of this research study was to investigate the implications of different levels of approach-avoidance tendencies that individuals have to the phenomenon of joy. The specific objectives of the research are threefold:

1. to construct an instrument with which to test the implications of different styles of avoidance-approach tendencies to the phenomenon of joy;
2. to assess the psychometric properties of the instrument; and

3. to test the relationship between the avoidance-approach tendencies toward the phenomenon of joy and (a) the strain associated with life events, experiences and perceptions, (b) substance use, and (c) various social as well as health-related variables.

1.4 Importance of the Research

Though emotional life is generally considered in psychology (Wallerstein, 1964) as oscillating between two poles of emotion--joy and sorrow (or misery), little actual research about the emotion of joy has been completed to date. As noted later, the bulk of research effort in clinical psychology and psychiatry has focused on solving issues in the pain and suffering areas of human experience. The legacy of this concentration has produced some imbalance in available knowledge about the positive components of the human condition, if not some distortion as well in the current perspectives about the nature of the human being. A second reason for the research was to fill part of the void in knowledge about the positive experiences of humans, an aspect which was consistently identified in the literature as an important feature of human nature and existence.

1.5 Problems in the Literature

Examination of the research literature and other pertinent literature concerning the experience of joy revealed a sizeable body of references, most of which were non-experimentally based. Despite the wide scope of interest in the phenomenon of joy, no major theory of joy has yet been developed. As well, few methodological techniques have been identified or associated specifically with investigation of the phenomenon of joy. What instruments of measurement exist were generally either weak when compared to modern standards of psychometric properties, or are very narrowly defined. No comprehensive study has yet appeared on the phenomenon of joy, and only one major literature review (Castrogiovanni, Fornaro, & Neglia, 1985) was found in a search of the literature. The major database of study in the area has been done by Dabrowski and his associates (Dabrowski, 1964, 1967, 1970, 1992; Dabrowski & Dabrowski, 1974, Dabrowski & Piechowski, 1972; Dabrowski, Kawczak, & Sochanska, 1973) within their general study of the theory of positive disintegration. Though their techniques are quite defensible from the point of view of measurement theory and empirical processes, the format of data collection involved relatively large time demands in administration and scoring procedures. Further, in an overview of the existing literature on the phenomenon of joy, only a limited number of inferences could be gleaned from the research studies to date. This was because of the restricted scope of most studies, which were without strong databases of support, have not integrated findings, and (with few exceptions) have done little comparison across investigations. Conclusive evidence about almost any aspect of the phenomenon of joy remains outstanding.

In tackling the domain of the concept of joy from an empirical perspective, it is apparent that sound data is especially needed. No amount of care in research design or carefulness in inference and interpretation (Campbell & Stanley, 1966; Cook & Campbell, 1979) can substitute for weak data. The first step in this process involved a thorough understanding of the concept to be investigated (Jackson, 1970, 1971, 1984, 1989; Loevinger, 1957). As such, the problems associated with the investigation of the phenomenon of joy were outlined within the context of a review of the pertinent research literature. Seven issues emerged concerning the phenomenon of joy:

1. Lack of a mechanism to explain how both positive and negative consequences arise from the same event of joy;
2. Whether positive and negative aspects of joy should be studied separately;
3. The paucity of research on the phenomenon of joy in general, and lack of a conception of joy that is multifaceted;
4. Reliance on a restrictive conception of joy which neglects values, processes of development, as well as issues in other disciplines such as altruism and the teleology of evolution in social biology;
5. The problem of retrospective bias in data obtained from self-reports;
6. Absence of validity evidence for the assumed merits of joy; and
7. Reliance on the questionable conception of coping and adjustment in relation to stress and other life experiences.

1.6 Definition of Joy

Highlighted in the issues surrounding the research literature on the phenomenon of joy is the argument that the definition of joy should include the "concept of goodness" rather than simply reflect the idea of joy as pleasure, happiness, delight, elation, gladness, enjoyment, delectation, or fruition. Not only does such a definition correspond to the precise meaning of the word joy (Funk & Wagnalls, 1989; Random House, 1980; Webster, 1992), but it is more consistent with usage in philosophy, theology, and rigorous humanism (Rychlak, 1977).

1.7 The Theory of Ontologic Joy

Extending from the problem of the lack of a precise definition of joy in the research literature, as well as a thorough study of the concept of joy, was the indication of a need for a theory of joy. In order to meet this need in an initial sense, a theory of ontologic joy was formulated. The use of the adjective ontologic as a modifier of the phenomenon of joy attempts to provide greater precision to a working definition of joy. Included in the reasoning involved in formulating a theory of joy was the premise that the theory retain a definition that was both non-secular and non-deterministic, but yet was compatible with the rigorous principles of scientific methodology. The view is thus advanced that ontologic joy characterizes the phenomenon of joy in its full spectrum of diverse meanings, and is consistent with the "readiness to sanction a heteronomous order that need not be consciously justified" (Adorno, 1973, p.61). In as much as the theory of positive disintegration (Dabrowski, 1964, 1967, 1972, 1979, 1992; Dabrowski & Dabrowski, 1974) represents the major theoretical and data based study to date of the phenomenon of joy, the theory of ontologic joy formulated in this research investigation drew significantly on the principles of that perspective. Also, the general theoretical material of existential philosophy, classical literature and theology (cf. Kaufmann, 1960) was incorporated into the theory. The current findings of the research literature concerning the phenomenon of joy were integrated as well, but because of the limited number of such findings, the contribution of them to the theory of joy proffered in this research investigation was less than that from the other literary material.

1.8 Plan of the Investigation

In a sequence of theory first and data later, the data are auxiliary to the study of a construct. There are a number of things that can be done to enhance data (Jackson, 1970, 1971, 1984, 1989). Thus, for reasons outlined by Jackson, as well as Loevinger (1957), the structural model of homogeneity was chosen as the framework to guide the testing of components for the theory of ontologic joy articulated in this research investigation. Because the existing instruments relevant to the measurement of the phenomenon of joy were deemed unsuitable, it was necessary to first construct an appropriate measuring instrument. The methodological requirements to test selected components of the specific theory of joy articulated in this research investigation necessitate that the scale instrument extend beyond the form of a survey of the features of joy, or an inventory of non-integrated aspects of the phenomenon. As such, a further advanced step has been taken in the design for scale construction, namely, the direct integration of two additional elements into the content items reflective of the phenomenon of joy: i.e., (1) the tendencies of approach and avoidance; and (2) that each item to be included in the provisional pool of items be adjudicated against the criteria of positive disintegration (Dabrowski, 1964, 1967, 1970, 1972, 1992; Dabrowski & Dabrowski, 1974; Dabrowski & Piechowski, 1972). The framing of provisional items in terms of approach-avoidance tendencies has been employed successfully in other scales (Thauberger, Cleland, & Nicholson, 1982; Thauberger, Ruznisky, & Cleland, 1981) of similar content domains. Inclusion of the procedure of further adjudicating each item against the criteria of positive disintegration theory was designed to ensure that each individual item was consistent with both the principles of emotional development and the idea of goodness within the definition of the phenomenon of joy.

There are several features of the theory of positive disintegration that support use of it as a criterion within the procedures of scale construction outlined in the literature review of this research investigation. Features of the theory of positive disintegration relevant to the study of the salient issues involving the phenomenon of joy include the provisions of:

1. incorporation of the processes of emotional development;
2. a linkage with ethics and the issue of values;
3. being the only major theory involving the phenomenon of joy;
4. not being embroiled in paradigm clashes with alternate models;
5. bridging the gap between the competing views of "kin selection" and "reciprocation" in the literature on altruism;
6. being futuristic and thus capable of integrating issues in evolutionary teleology;
7. compatibility with non-secular viewpoints including not being contaminated with the reward element, and those points of view that do not recognize that things just don't happen; and
8. compatibility with the principles of empirical research. As a molar theory, it is a guide to research, a framework for ongoing multifaceted processes of emotional development, a standard for assessing human aspirations by virtue of its hierarchial model, and a useful tool for making decisions in light of its analytic methods.

By constructing a scale pertinent to the phenomenon of joy in the form outlined above, the properties required to meet a molar theory (McLeod, 1975; Rychlak, 1977) were built at the onset. This feature was deemed preferable to attempting to fashion some semblance of molarity from data subsequently derived from a scale wherein this consideration has been tacked on to the end (Jackson, 1970) as an afterthought. In this way, the feature of psychometric measurement useful for development of an ontology of joy were built into the scale at the beginning. Resulting scores subsequently obtained from person's responses to the newly constructed scale can thereby be immediately interpretable as a measure of the approach-avoidance tendencies toward a joy ontology. The procedures employed for construction of such a scale are set out in the text of the investigation.

A rationale was also advanced for the selection and focus of the validity studies undertaken to examine the implications of different approach and avoidance styles. Several dimensions were selected for special study including: (1) strain to life events, experiences and perceptions; (2) variables of alcohol, drugs and other substances; (3) and various social and health-related variables. General problems associated with the currently popular, coping model, as well as the validity dimensions noted immediately above, were discussed within the context of the research investigation. Decisions about analyses conformed to current practices in research, and standard statistical rules regarding the criterion for evaluating significance (α = .05) were followed throughout the study. The procedures used for scale construction followed modern practices (Anastasi, 1988; Angeleitner & Wiggins, 1986; Carmines & Zeller, 1979; Cronbach, 1990; DeVellis, 1991; Jackson, 1984, 1989; Nunnally, 1978). Testing of the validity properties of the constructed scale, as well as hypotheses derived, followed routine procedures in similar research designs. In addition, a delimitation of the scope of the study and the limitations of the research, and its potential implications were described. Upon presentation of the statistical analyses, the pertinent findings of the study were discussed in relation to current issues in the research literature on the phenomenon of joy.

1.9 Scope of the Research

Although the plan of the investigation articulates the general boundaries of the research, it is useful to highlight what the design of the research might also have included but did not. For reasons of scope, the focus of the research investigation was delimited to the joy component of the joy-sorrow continuum referenced in the literature (Wallerstein, 1964). Consideration of the full spectrum of joy-sorrow would have been of potential interest as to whether response patterns for a positive emotion (joy) were different from those of an emotion considered negative (sorrow). A second delimitation concerned the restriction of validity studies to those areas where a moderate amount of research literature already existed. Notwithstanding these delimitations, the design of the study was considered fully adequate to meet the objectives set out for this investigation.

CHAPTER II

REVIEW OF THE LITERATURE

2.1 Introduction

The idea of joy as an emotion has been part of our thinking for some time. In the older classification of the emotions, joy was represented as one of the primary emotions (Wallerstein, 1964) and still is considered: among the biologically based "coarse emotions" (Scheff, 1985), as one of the fundamental emotions (Manstead & Tetlock, 1989; Sogon & Masutani, 1989), as a universal emotion in experience (Matsumoto, Kudoh, Scherer, & Wallbott, 1988; Wallbott & Scherer, 1988), and as one of the most useful of a limited number of concepts for making everyday distinctions among emotions (Shaver, Schwartz, Kirson, & O'Connor, 1987). It appears in Leichner's (1988) taxonomy of ten emotions and is among the examples mentioned most readily when persons are asked to name emotions (Fehr & Russell, 1984), as well as among the emotions children learn to name first (Bretherton & Beeghly, 1982). In their recent frequency analysis of English usage (Francis & Kučera, 1982), the term joy appears in the same range of frequency as the words adult and thousand, and is included in 12 of 15 genres of word usage, as well as among the 6,000 most frequently used words. Within reference tabulations, the PsychLit database (Psychological Abstracts: January 1983 to September, 1992) contains over 100 research articles wherein the term joy appears in either the title and/or abstract.

More specifically the topic of joy is noted persistently in the activities of people. Over 5,000 references are locatable in literary sources though most of these references pertain to the joy of something such as poetry, music, gardening, writing, dieting, money, travel, driving, and a host of other activities. The majority of references in both the popular media and research literature equate joy with the idea of either happiness or pleasure. Very few references have accumulated on any single aspect concerning the phenomenon of joy; and relatively few studies are of an experimental or quasi-experimental nature.

2.2 Perspective

2.2.1 Issues in Definition

At first glance the selection for study of the topic of joy (or more specifically, the implication of different approach-avoidance strategies in dealing with the phenomenon of joy) may seem curious in light of the more commonly understood and popularly used terms of pleasure and/or happiness. The concepts of pleasure and happiness are not only readily apparent in the psychological literature, but frequently appear in most of the literacy depictions about human beings. A recent review of the PsychLit database (Psychological Abstract: January, 1983 - September, 1992) uncovered over 8,000 references to the term pleasure, and over 900 non-overlapping additional references to happy or happiness in that database alone. Similarly, frequent use of subscript terms such as enjoy, bliss, and the like, are found throughout the popular press and media, as well as in everyday speech. Although frequently used interchangeably in the literature, pleasure is not synonymous with happiness or any of its derivatives, and neither term is synonymous with the concept of joy. While the idea of both pleasure and happiness are necessary for an adequate definition of joy, neither of these terms is sufficient. A more precise definition of joy entails the idea of goodness in its basic understood meaning. Although the terms pleasure and happiness (as well as the general flavour of such subscript terms as bliss, gladness and elation, among others) are reflected in dictionary articulations of the definitional meaning of the term joy, the idea of goodness is generally retained within the first definition of English language. For example, the term joy is defined in Funk and Wagnalls Canadian college dictionary (1989) as "a strong feeling of happiness arising from the expectation of some good or from its realization" (p. 731). Similarly, The Random House dictionary (1980) defines joy as "the emotion of great delight or happiness caused by something good or satisfying" (p. 479), while the New Webster's expanded dictionary (1992) defines the term as "pleasure caused by the acquisition or expectation of good" (p. 188). However, the most recent edition of Webster's new collegiate series (i.e., Webster's ninth new collegiate dictionary (1991) has shifted the emphasis in the definition of the term joy, away from the specific idea of goodness toward more generalized meanings. In earlier editions (e.g., Webster's new collegiate dictionary, 1961) the term joy implied "a more deeply-rooted, rapturous emotion" than either pleasure, which "more often stresses satisfaction or gratification than visible happiness", or delight which "usually reverses this stress" (p. 647). The most recent edition (i.e., Webster's ninth new collegiate dictionary, 1991) reduces the amount of emphasis for distinguishing among these selective terms. Similarly, whereas the term joy was earlier defined explicitly as "the emotion excited by the acquisition or expectation of good" (Webster's, 1961, p. 456), the current definition is more circumscribed with respect to goodness: "the emotion evoked by well-being, success, or good fortune or by the prospect of possessing what one desires" (Webster, 1991, p. 652). As noted above, the New Webster's expanded dictionary (1992) still retains the earlier idea of expectation of good. For the purposes of this investigation, the term joy is used in the sense of expectation of goodness (cf. Funk & Wagnalls, 1989; Random House, 1980; Webster, 1992).

2.2.2 The Concept of Goodness

A failure to distinguish among the concepts of joy, pleasure, and happiness (as well as the various subscript terms) has severely hampered the integration of knowledge in the area, which further tends to dampen the impetus for rigorous research. Preservation of the idea of goodness is especially critical to understanding moral life as referenced in the theological and philosophical literature (Christian, 1977; Popkin & Stroll, 1956), as well as the conjoint interplay between emotion and cognition in development of character (Dabrowski, 1967, 1970, 1992; Freud, 1955; among others). From this perspective, discriminating between pleasure and/or happiness within the context of goodness (joy) and pleasure and/or happiness excluding the context of goodness can set out quite different meanings, depending on the individual. Moreover, in the view that pleasure and happiness can result from goodness, joy can be experienced even though the activity in itself may neither be pleasurable nor happy. Thus, this distinction is presupposed to be an integral factor in explaining some of the contradictory and inconsistent findings currently existing in the literature.

The factor of goodness within a definition of joy extends beyond the idea of the moral good to include an experience of joy involving an elevation in spirit that is not simply pleasure or happiness. Attenuation of such positive affect is exemplified in the birth of an infant, which as Wertz (1981) has pointed out, involves a traumatic crisis that is not necessary undesirable: "When the meaning of the trauma includes confirmation and continuity, it may be transformed by the joy of a new freedom in the world"

(p. 205). In a similar view, the Christian idea of joy in seeing God in heaven extends beyond the simple aspects of pleasure or happiness per se to include the observation of goodness in the being of God. A sense of goodness is implied, as well, within aestheticism which holds that "the principles of beauty are basic to other and especially moral principles" (Webster, 1991, p. 61). Since such principles as beauty or good taste can be construed as preceding moral principles, or a least being somewhat conceptually independent, the idea of goodness does not need to include either moral or theistic components. In this sense, depiction of the concept of joy appears in such analysis as Chailley's (1983) speculation of Beethoven's reconciliation in the prologue to the "Ode to Joy", wherein the ideal of pure music is integrated with choral and vocal parts in the 9th Symphony and other of Beethoven's works. Similarly, joy has been found to be a marker of peak experience in artists (Yeagle, Privette, & Dunham, 1989), and in adults in general (Privette, 1986), and has also has been extolled at great length by Nietzsche (1960) in his philosophy of Joyful Wisdom.

2.2.3 Implications of Definition

Because of the particular focus in definition of the meaning of the term joy taken in this investigation, several implications to this investigation arise as follows: Firstly, as noted earlier, the bulk of the references wherein the term joy appears, generally equate joy with pleasure and happiness, but this is unsatisfactory as joy and happiness are not equivalent when viewed in the context of the idea of goodness. For the same reason, concepts such as "joy in living", "joy from mastery", and the references to "joy as emotional expression" are of limited use in the study of joy wherein the theological and philosophical denotations of goodness are retained within the concept. Notions such as the joy of learning, in general, or learning something particular, can be considered even less germane and are more appropriately pertinent to the idea of joy as pleasure or happiness derived therefrom.

Secondly, the term joy as investigated in this study is not synonymous with pleasure, happiness, enjoyment, delight, or delectation even though each of these experiences may be part of the common idea of joy. Specifically, this investigation concentrates on examining the implications of different approach-avoidance strategies in dealing with the phenomenon of joy as a deeply rooted and psychodynamically potent emotion contributing to the development of higher-order values and higher levels of psychic integration within people. The critical distinction between the consideration of the term joy as not synonymous with pleasure or happiness is due to the component of the concept of good contained in the fundamental meaning of the word joy. The ethic of perfection of character is held as most consonant with the rigorous conception of good described in existential-ontological philosophy as extolled by Aristotle, Shakespeare, Goethe, and Nietzsche, among others (Kaufmann, 1960). In this context, joy is clearly distinguishable from conceptions such as enjoyment, pleasure, delight, happiness, or delectation.

A third impact on this investigation, resulting from the definition of joy, involves the restriction of the type of research information that meets the test of relevance. Because of the retention of the ethic of goodness in the fundamental meaning of joy, most of the general research literature on the topics of pleasure (such as Freud's, 1955: Beyond the Pleasure Principle) and happiness (such as De Bono's, 1977: The Happiness Purpose) is rendered only tangentially relevant.

Fourthly, the question of "what is good?" requires further consideration. Philosophically many things can be good depending on the criterion of goodness involved. For Aristotle (1976), good is that which a thing aims to achieve in accord with its inherent nature. Aristotle terms this eudaemonic which translates as happiness, but which means the vital well-being evolving from exercising one's potential for a rational life. For G.E. Moore (1952), good is like yellow -- an immediate indefinable non-natural property which remains an open question. In Platonism (Plato, 1945; and the Pythagorean position) good is agathon, the name given to the highest good -- the supreme idea which is related to what it can fulfill or actualize out of its unique potential. An extension of the idea of highest good is the concept of summum bonum - "that ultimate final good (aim, end, purpose, value) of human life for the sake of which everything else is done... The following are some things that have been regarded as the summum bonum of life: pleasure, happiness, the greatest happiness of the greatest number, virtue, self-actualization, fulfilment of duty of conscience or the voice of God, perfection, self-mastery, contemplation, a good will, love of humankind, love of God, ecstasy, beatitude, salvation, power, money" (Angeles, 1981, pp. 283-284). The Kantian (1929, 1959) position defines good in terms of moral obligation and duty which are a priori concepts. A variety of other goodnesses (Angeles, 1981) can also be considered such as: contributory (the part it plays in something else that is considered good); extrinsic (for the beneficial consequences it brings); inherent (the quality in an object or experience that is valued or desired such as aesthetic form); instrumental (the means of obtaining another good, for example, money); intrinsic (sought for its own sake); and varied other combinations (such as deriving pleasure out of studying for an exam). In its general form the word good, "conveys laudatory qualities such as approval, commendation, excellence, admiration, appropriateness, and has meanings such as virtuous, beneficent, beneficial, favourable, genuine, praiseworthy" (Angeles, 1981, p. 111).

The plethora of meanings and illustrations of "what is good" identified above can each be characterized as possessing one or both of two elements: either an abstraction of thought about value such as the Kantian view of the moral law and similar variations of rational thought such as Moore's view that "good is like yellow"; or the idea of reward embedded in laudatory qualities and the summum bonum (Angeles, 1981). Because the elements of value as well as reward are embedded in the concept of goodness, both of these elements require further delineation with respect to the focus of this research investigation. These two elements are examined specifically in the next subsections.

2.2.3.1 Values. The general understanding of emotion is that it is rooted in the body and refers to "the pattern of feelings experienced physiologically ..." (Rychlak, 1977, p. 319). Once the flow of physiological reaction has passed, attention is given to characterizing the circumstances via the intellect (James, 1952). Conceptualizing the circumstances of the experience of an emotion not only involves an appraisal of the emotion (Arnold, 1970), but judgment of its reinforcement value (Rychlak, 1977). Theories of emotion that rely exclusively on physiological explanation have difficulty in accounting for both the fact that all individuals do not enjoy entertaining certain emotions equally and also the numerous twists and turns in emotional reactions that lie beyond counting how may basic emotions are supposedly nestled among the body's organic machinery. As well, physiological explanations neither explain the motivation to stimulate emotion reactions that are not active (such as the aesthetic efforts of people via the arts), nor the quests (of at least some cases of human beings) toward an ideal of human development (Dabrowski, 1964, 1967, 1992). Moreover, physiological explanations have difficulty both distinguishing as well as integrating the reinforcement (the likeability or positive and negative considerations) from the methodological context of reinforcement value -- i.e., the experimental context of assessment, the context of proof, and the context of scientific development from theory to method (Rychlak, 1977). In addition, the general canons of scientific objectivity have lent an artificiality to the psychological experiment, as the evidence of experience as well as explicit study of the question of experimenter-subject influences (Orne, 1962; Rosenthal, 1966) have indicated.

The call for a molar approach in the study of emotions that is holistic and integrated has been echoed by, among others, Pervin (1980), Rychlak (1977), and those concerned with the education of values such as Kohlberg (1963) in the area of moral development, and Dabrowski (1964, 1967, 1992) in emotional development. In criticizing psychology for its pretensions to the molar status of its hoard of molecular theories, McLeod (1975) poses that a theory is required which speaks to generosity, love, joy, sadness, and the willingness to die. Theories which appreciate the thrill and exuberance of life as well as the shadows are required. A defensible case can be made that the theory of positive disintegration meets McLeod's requirements, however, it does not appear that he was familiar with the tenets of positive disintegration theory.

A review of the research literature on the issue of value and the phenomenon of joy, however, indicates two lines of direction. The predominant line has been the utilitarian idea of value (Angeles, 1981) either: (1) as something being useful for accomplishing some purpose, such as: communication (Cartron-Guerin, & Reveillant, 1980), the cultivation of cheerfulness (Assagioli, 1973), the use of a rabbit as a bridge in psychiatric patients between external reality and contact with the milieu (Doyle, 1975), in personal growth (Wrenn, 1985); and signal value in infant's facial expressions (Schwartz, Izard & Ansul, 1985); or (2) in promoting the greatest good of the greatest number, such as : through catharsis (Misrahi, 1986), augmenting the development of handicapped infants, and in couple therapy (Evers & Crappo, 1983).

A small number of studies have focused on the technical aspects of joy and value, such as: pleasure (Abadi, 1982), a comparison of the personal values of Milton Erickson and Carl Rogers (Gunnison, 1985), characteristics of peak experiences (Yeagle, Privette, & Dunham, 1989), cross-cultural differences (Gilgen & Cho, 1979; Habteyes & Steinkamp, 1985) and the work of Gluck (1977) which is specifically focused on the implications of replacing surprise with explanation. The only major data-based work on the value of the phenomenon of joy either experimental or quasi-experimental, and which is distinguished from the concepts of simple pleasure or happiness, has been conducted by Dabrowski and his associates (Dabrowski, 1970; Dabrowski & Piechowski, 1972). In this series of studies, the focus predominantly revolves around the aspect of Great Joy. From the analysis of essay, biographical material, and verbal interviews, both the processes of emotional development and assessment of the level of that development are delineated. Because the reader may not be familiar with the fundamental levels of values within the theory of positive disintegration, a brief description is provided here. The specific criteria for each level of development regarding the matter of joy has been described by Dabrowski (1970; Dabrowski & Piechowski, 1972) as follows:

Level I: (External orientation and absence of reflection).

Joy arises from satisfaction of basic needs. It arises as a result of one's own superiority, triumph over others, and even from injustice and suffering of others. Joy comes from possessing concrete things, from brutal victories, etc.

Level II: (The person's orientation is internal and there is reflection, but no possibility of resolution: psychic immobilization).

Joy achieves a somewhat higher level. It arises through syntony as variable joy from the joy experienced by others, or as sadness from the sadness experienced by others. Joy is brought by temporary mental support, sympathy, rest, contact with nature, kindness received from others.

Level III: (Characterized by not only an internal orientation and reflection but also empathy and identification with others: alterocentric orientation).

Joy is brought by overcoming difficulties in development. It is a joy of discovering oneself in an objective and authentic way, of discovering one's own negative traits and the joy of overcoming them. Joy is also brought about by a dramatization of one's attitude towards life and by the growth of the dynamisms of the inner psychic milieu and by the growth of one's hierarchy of values.

Level IV: (Joy can be experienced as a consequence of feeling close to one's ideal).

Joy flows from the growing inner strength. This is directly related to the growth of personality, to an increasing awareness and control of oneself. It is also related to the satisfaction derived from cooperation with others. Important elements contributing to joy are creative dynamisms of sadness. Very characteristic for this level is the joyous awareness of the impossibility to regress to earlier levels of development, because one has taken education of oneself and autopsychotherapy into one's own hands.

Level V: (Joy is an expression of the highest empathy).

Joy arises from the achievement of autonomy, authenticism and empathy. There is a joy of a clearer vision of the ideal, and a joy from experiencing absolute contents, and sometimes from possibilities of approaching transcendence.

Since the theory of positive disintegration is a hierarchial model, the issue of judgment of values is deeply embedded both in the point of view of what components must exist in order to distinguish one level from another in the process of development, and the features of what constitutes the pinnacle of emotional development -- i.e., the ideal of personality. The schemata for this delineation includes not only characteristics that are present, but also examination of what characteristics could potentially have been present but are not. For example, the spontaneity of the feeling of joy and general syntony with the world in itself is a Level II characteristic in the absence of individual emotional ties, existential awareness of the human condition, and empathy. Entanglement of joy with intellectual exercises is also a Level II indicator. When valuation includes concern for the genuineness of joy, the joy is of a higher order (Level

II - III), and is of yet a higher level when derived from seeing others mature or overcome difficulties and handicaps (Level III - IV). The ethic of perfection of character in its general form is reflected in the model of emotional development described elsewhere by Dabrowski (1964, 1967, 1970, 1992; Dabrowski & Dabrowski, 1974). Although the Dabrowski model of character development has received considerable detailed scrutiny and work, the idea of perfection of oneself is also extolled (though perhaps not well detailed) in classical and philosophical literature. For instance, Nietzsche (1964) in The Will to Power outlines a philosophy of development driven by the power of life to affirm itself in spite of the ambiguity and intransigency of existence. He writes: "And this secret spoke Life herself unto me. 'Behold,' she said, 'I am that which must ever surpass itself'" (Part II, 34). This will to power, i.e., to more life, manifests itself within the law of life and "risketh itself thereby" (Part II, 34).

In the sense of personal action, one is both the judge and the object of one's own judgment, which Tillich (1952) summarizes thus:

> It does not look back, in stands beyond a bad conscience, it rejects the spirit of revenge which is the innermost nature of self-accusation and of the consciousness of guilt, it transcends reconciliation, for it is the will to power ... In doing all this the courageous self is united with itself and its secret (p. 30).

Hemingway (1929) also implies this principle in "they threw you in and told you the rules and the first time they caught you off base they killed you " (p. 338); to which he later added, "But man is not made for defeat. A man can be destroyed but not defeated" (Hemingway, 1952, p. 114).

The context of emotional development is not uniform and unidirectional but must be revisited many times at different levels of thought and engagement (Dabrowski, 1964, 1967, 1992). Despite whatever skirmishes arise, the adjudication is against the criterion of dignity (Kaufmann, 1960). Horatio, for example, says as Hamlet dies, "Now cracks a noble heart". Mark Anthony speaks similarly of Brutus: "This was the noblest Roman of them all"; and even though Brutus had engaged in the same act as the others, he was gentle, honest and free of envy, and "the elements so mixed in him that nature might stand up and say to all the world 'this was a man'" (Shakespeare, 1960).

2.2.3.2 The reward element. The idea that confronting the conditions of life without the hope of reward is a preferential strategy to avoidance styles is underscored in the philosophies of Nietzsche (1964), Shakespeare, Goethe and Aristotle (Kaufmann, 1960), Dabrowski (1964, 1967, 1970, 1992), as well as to some extent in the theories of Bugental (1965), and Tillich (1952). Preference for confrontation and incorporation of the difficulties in life within one's lifescript does not mean that discernible gain can be expected, and some data exists which documents that to be the case (Thauberger, Ruznisky, & Cleland, 1981). Moreover, some argument exists (Lazarus, 1979; Monat & Lazarus, 1977) that at least some forms of avoidance strategies (e.g., denial) may be preferable in certain circumstances. Expectation of reward is considered a major contaminant by Nietzsche, Shakespeare, Goethe and Aristotle (Kaufmann, 1960), as well as in the theory of positive disintegration (Dabrowski, 1992), essentially because such expectation is perceived to undermine the actions of self-sacrifice (which is also a central feature in the concept of altruism). Although there are only a couple of studies in existence which examine these matters directly in relation to joy, (Rosenhan, Salovey, & Hargis, 1981; Smith, Keating, & Stotland, 1989), and these studies suffer from the threats to internal and external validity identified by Campbell and Stanley (1966) and again by Cook and Campbell (1979) because of their quasi-experimental design, their findings nonetheless suggest that empathy is an inhibitor to altruism within the types of task demands made in quasi-experimental conditions. This territory needs to be untangled.

A preliminary investigation into the phenomenon of joy (from the point of view of differences in how individuals engage the phenomenon of joy) was undertaken by Tolor (1978). This research is highlighted here because of its singularity in the literature relevant to this investigation. Briefly, the features of the Tolor study were as follows: Comparisons were made between high and low sensation seekers (psychometrically defined by scores on the Sensation Seeking Scale) as well as sensitizers and repressers (psychometrically defined by scores on the Revised Depression - Sensitization Scale). The investigation proceeded under the hypothesis that greater diversity of joy and more intense levels of joy (as measured by the Joy of Life Scale) would be associated with low hopelessness, high sensation seeking, the perception of the world as just, and high sensitization as compared to high repression. Female subjects were predicted to score higher in sources of joy and intensity as compared to males. The hypothesis was supported only for sensation seeking in that high sensation seekers assigned significantly higher mean intensity rating to experiences that produced joy in life. Although not significant, sensitizers actually selected fewer joy-related experiences and evaluated these experiences as less joyful. Positive emotional events as compared to other kinds of activities and events most often led to high levels of joy.

The Tolor study is especially relevant to the rationale for the investigation presently followed for three important reasons. Firstly, the study illustrates an alternate approach to the study of the phenomenon of joy from the perspective of joy as pleasure and delight. From this perspective, thrills, ecstasy, happiness and joy in life are compatible with a philosophy of life that can be viewed in the sensation seeking vein. One can anticipate quite a different response pattern wherein joy is defined within the context of goodness. A second aspect of the study illustrates that sensitizers and repressers are not easily distinguishable from each other in the domain of life issues such as joy in life, hopelessness, and the perception of the world as just. This finding is consistent with the results reported by Thauberger, Ruznisky, & Cleland (1981) in relation to confronters and avoiders (who have some conceptual overlap with sensitizers and repressers, respectively) regarding various existential issues such as death, rejection and loneliness. It is clear that considerably more empirical work is necessary to delineate the characteristics of different engagement styles among people with respect to life matters. Thirdly, the Tolor finding that positive emotional events most often led to high levels of joy illustrates the significance of emotional components in life experience as distinct from other kinds of activities and events that may lead to pleasure, happiness, or the like.

This independent empirical support for the significance of the emotional factor in human lives underscores the emphasis given by Dabrowski and his associates (Dabrowski, 1964, 1967, 1970, 1992; Dabrowski & Dabrowski, 1974; Dabrowski, Kawczyk, & Sochanska, 1974) to a hierarchical model of human conditions in terms of emotional development. In as much as the Tolor (1978) study underscores the need to integrate emotional factors in the study of sensitizers and repressers, the use of the analytic principles of the theory of positive disintegration in the keying of the provisional items provides some independent evidence supportive of imposing those criteria. A more detailed discussion of this aspect follows in a later subsection of this paper.

2.2.4 A Theory of Ontologic Joy

The theory of ontologic joy that is formulated within the context of this research investigation is founded on general principles drawn from a rigorous perspective of ideas consistent with ontology, the values of human dignity and worthiness, and an hierarchial view of emotional development. Ontologically, the idea of confrontation of existence initially involves mostly negative feelings reflected in the fact that the predominant content of existential philosophy and psychology have concentrated most on those feelings and issues. From a perspective of hierarchial development, a distinction between joy and happiness/pleasure can be made -- with pleasure and happiness being related to hedonistic immediate positive feelings of external orientation, and joy being associated with awareness, differentiation, evaluation, goodness, and personality development.

Within the theory of ontologic joy, good is defined as the dignity of human beings (Dabrowski, 1964, 1967, 1970, 1992; Dabrowski & Dabrowski, 1974) without any connotation of the element of reward being derived by this premise of worthiness either for oneself or for others. If a benefit or reward evolves from this perspective, it is artifactual, neither the result of an intrinsic expectation nor an extrinsic consequence of design, maneuvre, or manipulation. Descriptively, this quality can be characterized as involving a nobleness of bearing and spirit, with greatness of soul, a recognition of merit and deserving quality of another, integrity, honour, respect, consideration, elevation of mind above the low, mean, and ungenerous -- or in one word, magnanimity -- that quality of being that enables one to bear trouble, to disdain meanness and revenge, and to make sacrifices for worthy ends. Although such type of individuals are well referenced in literature (Aristotle's great souled, Plato's philosopher king, Shakespeare's tragic hero, Goethe's ideas in Faust, and Nietzsche's Zarathustra) they are not commonly depicted in most literature whether that be classic, research, professional, or layperson reading materials.

No person, however, has exclusivity for ensuring development of this quality. Observation, however, illustrates that many individuals are weak in such ownership. The quality of magnanimity without reward transcends most of the criterion properties of what is considered good, described earlier in this chapter. Because of general unfamiliarity of this viewpoint, a further elaboration of the perspective is discussed next.

A working description of the mode of one's own existence, of being in the world, embodied in the perspective of magnanimity without reward has been illustrated by Krill (1966) as follows:

> Meaningful living through self-encounter in the situation at hand despite a world of apparent futility. Meaningful living is not necessarily equated with happiness or pleasure; self-encounter is essentially awareness of one's own personal freedom of choice and the responsibility one bears for his actions as he responds to others and to the world of possibilities available; the situation at hand refers to whatever possibilities confront him in the present moment; and a world of apparent futility is an awareness based on realism that one acts despite the lack of

> assurances and guarantees of reward or utopian results for one's behavior (p. 29).

In essence, this perspective is consonant with what Kierkegaard (1941) termed "being the self which one truly is"; what Thomas (1967) describes in terms of "being open enough to see the world as it is, knowing what one wants, and having the courage to follow that sense of inner direction"; or what Shakespeare (1960) articulated in his sonnet XCIV: "the summer flower is to the summer sweet, though to itself it only lives and dies."

The quality of character -- i.e., magnanimity without reward - is one that few individuals ever fully achieve (Dabrowski; 1964, 1967). More often than not, even the more completely developed individuals meet "with base infection" (Kaufmann, 1960). This position about character is particularly articulated in those writings focused on the tragedies of humankind. In Shakespearean thought, the available prerogative to those individuals is tragedy wherein the tragic hero or heroine meets destruction without the expectation or receipt of any reward. The element of reward is a particular contaminant in Kaufmann's (1960) view, and he points out by way of criticism of Christianity that the reward element recurs nine times and the idea of reward at least a further nineteen times in the Sermon on the Mount. Moreover, a series of threats of consequences are described for those not prescribing to the Christian view. As a result, the element of reward mitigates against genuine self-sacrifice (Kaufmann, 1960), which both the Christian theologians Niebuhr (1956) and Bornkamm (1947) acknowledged as a troublesome element in evaluating Christianity as a philosophy of life. Though not always explicit in their optimism, various existential writers lean toward favourable results and benefits accruing from the existential prescription. For example, Breisach

(1962) in his discussion of modern existentialism, first noted that "those who want a clear message of salvation will understandably not be satisfied with such little promise" (p. 189), but, goes on to suggest "a meaningful life can come from this rooting" (p. 199). In this investigation, however, no such inklings of reward are considered forthcoming. The theme examined in this investigation is restricted to the implication of holding or not holding a rigorous orientation to the phenomenon of joy in human existence.

Because the theory of ontologic joy is specifically formulated in the same basic framework as the more general theory of positive disintegration, the levels of ontologic joy are also hierarchical. In the theory of ontologic joy, the structural characteristics of each level of development are considered to be virtually identical to those in the general theory of positive disintegration. Levels of development are thus distinguishable: primitive integration (Level I), unilevel disintegration (Level II), multilevel spontaneous disintegration (Level III), organized multilevel disintegration (Level IV), and secondary integration (Level V). As with all other forces of development (e.g., conflict, curiosity, among others) and expressions of behaviors (cognitive, emotional, actional, motivational, imaginational) joy or happiness or pleasure (and their subscripts) will be experienced differently at each level of development.

On the level of primitive integration (Level I), joy involves an external orientation, lacking in reflection as well as sadness. An orientation to pleasure dominates, and experiences of happiness just happen. During Level II, the orientation is more internal and reflection is present, but there is no possibility of resolution of conflict. Some disintegration arises, for example, in the choice of conflicting pleasures, and happiness occurs as an awareness of equally opposing elements, for instance, as is characterized in the appreciation of bitter-sweet appraisals. Level III is also characterized by an internal orientation with the presence of reflection, empathy, and identification with others. Joy emerges within the context of goodness. Through Level IV, joy is related to the closeness of one's ideal, while at Level V, joy is an expression of the highest empathy.

The definition of joy in terms of happiness as described in dictionary references (e.g., Funk & Wagnalls, 1989; Random House, 1980; Webster, 1992) can therefore be associated with Levels I and II, while the definition of joy where the idea of goodness is included is more aligned with Levels III, IV and V. In this framework, joy as defined within the context of goodness does not readily emerge until the third level of development. Because Level III involves the process of disintegration, awareness and sadness are also constituents which become more complex and complicated as development increases. There is no extrinsic reward, only development. Joy in this context is the emotion excited by living toward goodness. The above system or framework is useful for analyzing the quality of joy expressed in data responses, or alternatively, the types of joy examined in specific research studies. For example, Adamson (1980) describes the case of a depressed woman who under a crisis situation was told that she in fact was experiencing a recovery wherein she wept "tears of joy." Within the classification framework of ontologic joy, this response or expression of behavior of joy is essentially a Level II reaction. On the other hand, Efran and Spangler (1979) also describe the case of crying in males, which in their view the "tears of joy" indicated recovery. Analysis suggests these "tears of joy" are more in line with discovering one's own negative traits and the joy of overcoming them, which is within a Level III categorization. In terms of this framework of analysis, much of the published research on joy would be classified as only Level II joy.

In summary of the above, the emphasis in this research study is the investigation of the concept of joy wherein the idea of goodness is retained. Goodness for the purposes of this study is defined as the recognition of the dignity of human beings, the worthiness of others for which no accoutrements of reward or extrinsic benefits are derived from holding such a perspective. This perspective tends to appear more in existential thought than in humanistic psychology which subscribes to eudaemonistic ethics of self-fulfillment and happiness (Wechowicz, 1988). In terms of this investigation then, most of the humanistic literature (such as Schutz's, 1967: Joy: Expanding Human Awareness) has only cursorial relevance, as does the delectation literature on amusement, fun, humour, or the more extreme hedonistic material.

Notwithstanding these demarcations outlined above, a further implication to this investigation, which arises out of the particular definition of joy adopted herein, concerns the issue that the ideas of pleasure and happiness cannot be completely divorced from the idea of joy without producing a description of content so restricted in focus that only the odd philosopher or the odd saint would find it germane or meaningful. Even were such a highly focused perspective imposed on the content of the general understanding of joy, the question immediately arises: How does this description compare to the generally understood meaning of pleasure or happiness? In order to circumvent such a convolution, this study tackles this threat to construct validity in two ways: (a) by following a nomothetic course of study (Rychlak, 1973) of the topic of joy -- i.e., the general meaning of the term joy is retained in the sense of pleasure, happiness, delight, delectation, enjoyment, and fruition based on the assumption that a theoretical abstraction can be made which has general applicability to several members of a given class. In this kind of empirical study, the construct of joy can be investigated across a distribution of people in trait fashion. This approach is essentially objective and is "highly suitable to extraspective formulations" (Rychlak, 1973, p. 15), and is further suited to the use of large number of subjects, the application of mathematical statistics, a large array of content items, and so forth; and (b) by ascribing the idea of dignity without reward as a criterion of keying the content items. The numerous features and components contained within the analytic procedures described by Dabrowski (1970), which will be imposed as a criterion of item scoring, are discussed more fully in a later section of this research investigation. The justification for this premise is based on the assumption of the idiographic method (Rychlak, 1973) of empirical study. The combination of nomothetic and idiographic methods of empirical study was popularized by Allport (1946), but first proffered by Windelband who declared that judgments of natural science are nomothetic while those of history are idiographic (Cassirer, 1944). Idiographic study emphasizes the uniqueness of individual person or things which may not be generalized to everyone on a more-or-less basis. It is thus recognized that individuals may deviate on particular issues or topical contents from their ordinary mode of operating. By attaching the value of goodness (dignity without reward) as a property of the content item through the keying of item procedure, the idea of joy (as it is concerned in this investigation) is preserved. Variations in how individuals respond to these items can thus be studied both nomothetically and idiographically, which enhances the possibility for yielding results that are apt to be more valid than if only one method of empirical study were used.

Specifically, in ethical terms the idea of dignity without the expectation of, or receipt of, reward is consonant with the classic philosophical "perfectionistic ethic" (Angeles, 1981). This kind of ethic is depicted as a conception wherein perfection of character is the highest good to be aimed at in life as opposed to such other kinds of ethical ends as pleasure, duty, happiness, self-fulfillment, utilitarianism, self-realization, or teleological values. Central to the perfection ethic is a shared value regarding the dignity of humans. In its solvent features this value is consistent with a rigorous ontology wherein the element of extrinsic reward has been purged.

2.2.5 Other Perspectives Regarding Joy

To this point in the evaluation of the literature on the phenomenon of joy the discussion has focused on the rationale supporting the study of the theory of ontologic joy on its own merits. Supplemental support for the study of the theory of ontologic joy is further founded on the fact that no other theory of joy has yet appeared that is either substantive or salient. Despite the permeation of the concept of joy throughout the popular and research literature, the progression of theory with respect to the phenomenon of joy is still in the early infancy stage of development. In light of this circumstance, nonetheless, it is useful to examine the alternate perspectives (despite the rudimentary development) regarding the concept of joy that currently exist within the research literature. Such examination is particularly useful to understanding the context of the present research investigation within the existing research literature, as well as subsequently evaluating the status of the research findings obtained from the present investigation.

2.2.5.1 Current theoretical viewpoints. Although no substantive theory of joy has yet appeared in the published research literature, inklings of such a development, however, appear in a limited number of references. Scheff (1985), for example, proposes a general theory of expressive needs common to all human beings wherein joy is included among the "coarse emotions" of grief, fear, anger, shame, and love-attachment. His theory, however, is primarily focused on correcting the weakness in the instinctive, culturist, and humanist perspectives of the relation between culture and biology. In a more specific way, Carlson and Brincka (1987) were able to demonstrate experimental support for a hypothesis concerning humanistic affects of joy, distress, and shame derived from the theory of ideological scripts. Joy in the context of such research, however, is only indirectly germane to a theory of joy per se. A similar adjudication can be made with respect to Kivley's (1988) depiction of an attitude of joy, as well as Duhl's (1986) description of a state of excruciating aliveness that is an integrating and health-giving joy.

Within the literature on the phenomenon of joy, Basch's (1984) characterization of joy as a tension-reduction system perhaps qualifies as a theory in its rudimentary denotation. The idea of a tension-reduction system was initially reasonable in light of the general acceptance historically of the tension-reduction hypothesis in stress, alcohol and substance use, and in psychoanalytic thinking in general. A tension-reduction characterization also seems plausible in light of the historical belief that joy was conceived as a primary emotion which tended to express itself in laughter as Darwin pointed out (Wallerstein, 1964). Moreover, the response of laughter appears endogenous to the human being. Its close functional relationship to joy and smiling can also serve the purpose of tension-reduction (Srofe & Waters, 1976). Such a characterization of joy, however, rests on the premise that the motivational behavior is affective from the start. Freedman (1984) has criticized this premise due to both the subjective element in all definitions of affect, and problems associated with confusing neonatal affective behavior with affect in general.

The premise that joy as an affect is inherent in motivational behavior from the start does not seem supportable empirically. For example, Schneider (1981) demonstrated lower recognition of the facial expression of joy in deaf children (ages 5 - 17 years) than normals, and also, progressive improvement with age for both normal and deaf subjects. In contrast, the emotions of fear and surprise did not show improvement with age. The more rapid and complete development in subjects with normal hearing was perceived to be likely due to voice intonation cues available. A second line of evidence relates to the conception of joy as an affect (wherein learning seems to play a dominant role) is the research pertaining to decoding of emotions. Herein, Sogon and Izard (1987) found both male and female research participants were unable to identify the emotion of joy, as well as affection and acceptance from observations of body movements of Japanese actors and actresses with their backs turned toward the viewer while posing body movements of several emotional categories. Recognition, however, was possible for decoding fear, sadness, anger and disgust. Wallbott (1988), however, found recognition of joy to be very high among primary school students when judging close-up facial expressions of emotions portrayed by an actor and actress. It thus appears that the decoding of positive emotions from body movements requires the observation of facial or at least frontal features. The need for such additional information implies that recognition of joy is influenced by learning mechanisms contained within social experience (Sogon & Izard, 1985). Also consistent with the view that joy involves learning and individual perspective are observations of location expectation (peek-a-boo game). Investigations indicate that children at 6 - 9 months do not appear to enjoy (as judged by the frequency of their smiling response) deviations from their expectations (Parrott & Gleitman, 1989). It remains unclear though, to what degree biological versus social learning conditions influence the emotion of joy (Basch, 1984), as well as what interactions mediate the development of the emotional response of joy. Evidence of this has been provided by Stapley and Haviland (1989), who found three factors (positive, inner-passive, and outer-hostile negative) in both genders (ages 11 - 17 years) across 12 emotions; however, boys found activities and achievement, while girls found affiliation to be emotionally salient. Though not specifically referenced to the emotion of joy, gender differences in positive emotions according to the Stapley and Haviland data, are pervasive and include differences in the organization properties of the emotions. Gender differences, however, may be culturally dependant as Steinkamp and Habteyes (1985) suggest from their study of Virgin Island students, wherein they found that males were most apt to perform behaviors to meet expectations while females were most apt to perform behaviors they enjoyed. The need to consider cultural differences, as well as systematic individual differences, is apparent from the indication of wide diversity in the intensity of each emotion, the amount of control individuals have, the duration of the emotion, the amount of verbalization while experiencing an emotion and the antecedents precipitating an emotion, which have been found across five Western European countries (Scherer, Summerfield, & Wallbott, 1983).

2.2.5.2 Other viewpoints regarding the structure of joy. Irrespective of the meanings of the term joy that have been attached to it by different authors, research data appears to support distinctions in the structure of the emotion. A clear distinction between the descriptive terms of elation and gladness appears to exist, and data suggest there may also be a distinct structure to joy (deRivera, Possell, Verette, & Weiner, 1989). As well, cross-cultural studies (Nagata, 1978) of the semantic structure among the English terms joy, pleasure, and delight, appears to be similar to native Japanese, suggesting that the mechanism underlying translation makes subtle difference in synonyms insignificant. Across emotions, joy has been found to be less easily recognized from vocal-based signals than anger or sadness, but more readily recognized than fear (Johnson, Emde, Scherer, & Klinnert 1986). Pulsation interpretation (Fonagy, 1971) of vowels and consonants indicates that intonation differences appear in aspects of anger and tenderness, joy, musical language, complaint, flirting, irony and ambiguity. The learning disabled appear to misinterpret the emotions (joy among others), though accuracy of recognition is improved for most people when verbal interpretations of a transitory condition or as indication of a cheerful disposition were included as clues along the sad-joyful dimension (Schule, 1977). Developmentally delayed children, however, appear to determine another's emotional state (e.g., joy, anger, fear) from external facial expression as successfully as normally developing children (Sternina, 1990), though Solomon (1977) found that judges only agreed when told what to expect. Schizophrenics also tend to demonstrate weaker emotion recognition scores than normal, and exhibit a large positive response bias to the enjoyment--joy category for photographs of facial expressions (Dougherty, Bartlett, & Izard, 1974). Response bias also appears evident in completing a mood adjective check list under a joy instructional set (Meadows, 1975). The potential for a response bias in favour of enjoyment--joy appears reasonable in light of the demonstrated preference shown by infants for joy related stimuli across several different situations. Infants (4 - 6 months) were found by

LaBarbera, Izard, Vietze, and Parisi (1976) to look at facial expressions of joy significantly longer than anger or neutral expressions. As well, infants tend to move closer to their mother under facial expressions (displayed by the mothers) of fear than of joy (Klinnert, 1984). Further, infants in experimental situations are more inclined to cross the deep side of a visual cliff under conditions of joy or interest expressions in their mother's face than under facial expressions of fear (Campos, 1980; Sorce, Emde, Campos, & Klinnert, 1985).

Manifest reactions to the phenomenon of joy appear, however, to undergo modifications across time. Whereas 7 month old infants could not categorize facial expressions of joy and anger successfully (Phillips, Wagner, Fells, & Lynch, 1990), and though 9 - 12 year olds tended to substitute joy for acceptance (Kokut, 1989), the ability to judge emotions was found (Peng, Yang, & Yang, 1985) to differ significantly between 10 year olds and 14 year olds though not between 14 and 20 year olds. While developmental differences have appeared in studies of young individuals (for instance, 8 - 15 months, girls were perceived as expressing joy twice as often as boys: Haviland, 1977), this gender difference was not found in adult university undergraduates (Allen & Haccoun, 1976). On the other hand, some differences not evident in youth appear to become evident later in life. For example, while differences in sense of humour or manifest joy were not found between gifted and non-gifted children (Barnett & Fiscella, 1985), the septuagenarian decade is enhanced among the gifted (Schneidman, 1989). Other differences appear to arise as well. Joy appears linked to greater sociability and extraversion (Sannikova, 1982); and the predisposition to joy appears to be related to a predisposition to anger in adult males, but to a predisposition to fear in adult females (Plotkin, 1982).

Some research exists on the mechanisms involved in the emotion of joy, though much of this literature is only descriptive of processes, particularly in relation to the idea of mastery. The general form of inference is characterized by Kusyszn (1990), who suggests that where humans produce desired effect they experience pleasure (e.g., joy). Proscriptions (primarily based on belief) vary from mastery of affect in psychotherapy (Hurston, 1977), and showing joy in encouraging task performance in the mentally handicapped (Pitsounis & Dixon, 1988), to correcting the imbalance of joy of mastery versus threat of intimacy in executives (Kofodimos, 1990) as well as their sense of competence, and the function of joy in women with the imposter phenomenon (Clance & O'Toole, 1987).

A small number of data-based studies have identified associations between the phenomenon of joy and several different situations. That infants display more joy during learning situations (Lewis, Alessandri, & Sullivan, 1990) is readily apparent in everyday observations as perhaps is the anticipation of Savitsky, Izard, Kotsch, and Christy's (1974) finding that the opportunity for deliverance of an electric shock increased aggression under the expression of enjoyment (smile) in the confederate victim. Comparatively, anger decreased aggression, while fear and neutral expressions produced no effect. Less apparent, however, are a number of differential effects embedded in the factor of joy conditions. Dorfman (1986) has found that those with strong nervous systems exhibited greater work durations and volume, as well as greater motion frequency in performing physical work in the joy condition versus the suffering condition (both evoked by music). What is somewhat surprising, however, is that subjects with weak nervous system exhibited increased work productivity in the suffering modality. Another finding of some curiosity is the findings of Landman (1987) who demonstrated experimental support for the hypothesis that greater regret for action than nonaction would occur in joy versus happy outcomes. In addition, joy was magnified when explicit knowledge was given of a missed negative outcome over having made a good decision. Evidence that individuals perceive joy differently than other emotions such as anger has been provided by Clark, Milberg, and Erber (1984) who demonstrated predicted effects on positive stimuli (under arousal conditions) but not on negative stimuli.

2.2.5.3 Other research approaches. Although theories of human emotions have figured prominently in the study of human development and accompanying behaviors, much of the experimental research within this sphere has concentrated on the more negative reflections of fear, anger, distress, and sadness. This is not surprising from the point of view that much of psychiatry and psychology, as well as the social sciences in general, have traditionally focused on solving human difficulties and suffering. Success, joy, cheerfulness, or satisfying experiences have never been considered much of a problem. Such positive phenomenon, however, have recently been shown, for example, to influence self-efficacy (Kavanagh & Bower, 1985), to assist the development of a therapeutic group climate for elderly persons (Saul & Saul, 1990), and to have systematic individual, as well as cross-cultural differences (Scherer, Summerfield, & Wallbott, 1983).

As with the study of any topic wherein measurement is involved, the validity of what is measured and the adequacy of the measurement tools are in question. Some experimental study currently exists in the literature on the phenomenon of joy, however, no adequate standardized instrument has yet emerged. Previous work has relied on examining data from a variety of techniques such as: response from facial expressions

(Barabantschikov & Malkova, 1988; Peng, Yang, & Yang, 1985; Phillips, Wagner, Fells, & Lynch, 1990; Rutledge & Hupka, 1985; Schwartz, Izard, & Ansul, 1985; Wiig & Harris, 1974); direct questioning (Fagan, Schmidt, Wise, & Derogatis, 1988); projective testing (Kaffman, Elizar, & Sivan-Sher, 1984); endorsement frequency in adjective check lists (Krawczyk, 1973); classification of verbal (Brozova, 1985), as well as video (Carlson & Carlson, 1984) materials; sentence completion (Okaue & Aruga, 1983); raters (Barnett & Kleiber, 1982); and differences in responses to concept pairs (e.g., joy - sorrow) in studies of thought changes when switching between foreign languages (Popiel, 1987). Some work has employed induced or simulated emotional states (Janal, Colt, Clark, & Glusman, 1984; Kaffman, Elizar, & Sivan-Sher, 1980; Levi, 1982; Petrenko & Kucherenko, 1988; Provost & Gouin, 1979); general clinical observation of anhedonia in schizophrenia (Cohen, 1989); task manipulation in the study of altruism (Rosenhan, Salovey, & Hargis, 1987); and polygraphically recorded psychological responses to imagined experiences (Waters, Bernard, & Buco, 1989). A few instruments, however, exist for measuring joy such as: Smith's (1986) Christian Life Assessment Scales; Templer, Salter, Dickey, Baldwin and Veleber's (1981) derived factor score labelled Joy of Pet Ownership (Likert type); and the Russian emotionality scales (Ol'shannikova, Semenov, & Smirnov, 1976; Pintchouk, 1981; Plotkin, 1982; Samarova, 1987). These instruments are unsatisfactory for use in this investigation for reasons of narrowness and specifically in both the Smith (1986) and Templer, et al. (1981) scales, as well as the dated methodology used in the Russian scales (cf. Jackson, 1984, 1989). In addition, the content of these scales is of limited relevance with respect to this investigation, which is primarily concerned with examining the implications of how different individuals deal with the phenomenon of joy. While several measures exist which pertain to the topic of happiness, these too are unsuitable in content because of the important distinction drawn between the concepts of joy and happiness as noted earlier in this paper. In light of this circumstance, a major objective of this investigation is to construct an instrument to measure the phenomenon of joy within the context of modern principles of scale development outlined by current theorists such as: Allen and Yen (1979); Anastasi (1988); Carmines and Zeller (1979); De Vellis (1991); Feldt and Brennan (1989); Jackson (1970, 1971, 1984, 1989); Messick (1989); Morey (1991); and Nunnally (1978).

2.3 Problems Present in the Literature

Recently, the general psychological literature has shown an increasing number of research publications focusing on positive attributes of experience. For example, Zimmerman (1983a) has concluded that negative life events are of a distinctly different quality of stress than positive life events. That stress can result from positive experiences has been known for several decades (Selye, 1956, 1974), and that anxiety can arise from pleasurable activities and drives has been known even longer (Freud, 1955). It seems evident that any event or activity can potentially produce both positive and negative consequences to a particular individual. No known data, however, yet exists which delineates the mechanisms giving rise to these bipolar consequences to the same activity or event. This deficit arises, in part, as a result of a lack of theory to integrate such findings and subsequently guide research uncovering the principles salient to deciphering such mechanisms. The absence of suitable measuring instruments of such aspects as bipolar consequences to the same situations reflects a need for greater attention to the molar features of the phenomenon of joy. That there might be direct negative consequence to something perceived so widely positive as the phenomenon of joy has not been an idea given much attention in studies of the domain, even though negative consequences appear in virtually all known phenomenon.

Another reason why the literature is unsatisfactory is the absence of firm knowledge about the implication of engaging different strategies to positive experience and activities. Although only a small number of experiments have been conducted which involve the manipulation of positive and negative consequences, these results have been inconsistent (Martin, Buckholt, Pipes, Nivens, & Katz, 1987). The issue of whether or not positive and negative experiences should be studied separately as Weinberger, Darnell, Marz, Hiner, Neill and Tierney (1986) contend, is best answered empirically. At this point, consensus is high that considerably more work must be done on the relationship between positive experiences and human difficulties (Cohen, McGowan, Fooskas, & Rose, 1984; Sarason, Sarason, Potter, & Antoni, 1985; Zimmerman, 1983a).

A third related concern with the literature on the phenomenon of joy is the paucity of research in general and the undifferentiated conception of joy employed throughout most research investigations. Data is simply not yet available to draw firm conclusions on any aspect of joy studied so far. Since most of clinical psychology and psychiatry has concentrated on alleviating suffering, it is not surprising that the bulk of research has focused on various illnesses, diseases and maladies within which pain and unhappiness are frequent accompaniments. Concomitantly, classical literature and philosophy, as well as portions of other social science disciplines, have sought to erase pain and suffering as evidenced in the recorded histories of those disciplines. The existentialism movement in particular has been severely criticized for the concentration on the negative aspects of the human condition. For example, Blackham (1965) writes: "Existentialists are commonly ridiculed for dramatizing the ordinary. Sensible people accept the contingency of the world and get on with the job of living in it. Existentialists moan in anguish to find themselves gratuitous and derelict in a possibly impossible world, shelterless orphans deprived of the mother comfort of reason and necessity" (p. 165). The theme of Blackham's criticism, however, is not limited to just secular movements such as existentialism. Zautra and Reich (1981) conclude from their review of the literature, that even where positive life experiences have been studied, examiners have consistently given the positive dimensions "short shift" in developing and testing models of mental health and psychopathology.

Although the indication of more active study of positive experiences evidenced recently in the research literature may give some balance to the view that the human condition is not a skewed collection of unpleasant problems, it is necessary that any correction to the understanding of human behavior will be advanced, not by simply adding more research references on positive aspects of human experiences, but through critical appraisal of those positive experiences. Most research work, however, past and present, pertaining to the phenomenon of joy has not focused on rigorous deciphering of the nuances of joy. The term joy consistently appears as a conception of a unitary phenomenon. But joy is not just joy. In the Buddhist conception, joy is distinguishable from other connotations of joy, as well as the special meaning attached to sympathetic joy which is distinguishable from its "near enemy" -- grief (Kornfield, 1985). For W. H. Sheldon (Vande Kemp, 1990), joy is embedded in a psychotheological definition of the soul -- the capacity for imaging pain and joy. Dabrowski (1964, 1967, 1970) characterizes Great Joy by empathy which is distinct from the joy described in peak experiences of personal development (Privette, 1986; Yeagle, Privette, & Dunham, 1989). In the holistic context of people's lives, joy does not occur in isolation of other dimensions in experience nor is it divorced from various other attributes of the person experiencing it. The feelings of joy may sometimes be linear and result from direct linkage to a discrete event, such as the joy of mastery of a particular task (Kofodimos, 1990; Kusyszn, 1990), result from indirect linkage as in the joy of expressing feelings such as resolving the dilemma of the desirability of allowing affect discharge in psychotherapy (Enke, 1989), or occur laterally as in developing a therapeutic group climate for the aged (Saul & Saul, 1990). Joy can be ubiquitous as it arises in enhancing the joy in living for the elderly (Brandler, 1985; Kuypers, 1977; Mack & Gorsuch, 1986). It can occur cyclically as in Dabrowski's (1967) concept of multilevelness and Nietzsche's (1960) phenomenon of eternal recurrence, or circularly as in Hurston's (1977-78) description of emotional growth and cure from anxiety through depression, anger, and sadness to a feeling of joy. Sometimes absence of joy is of distinctive relevance as in the study of anhedonia in research on schizophrenia (Cohen, 1989), or be denied others as in the case of "soul" murders (Shengold, 1978a, 1978b) where a person is raised in virtual isolation from others. At times, joy is paradoxical as in "tears of joy" (Adamson, 1980; Efran & Spangler, 1979), inversed as in obtaining joy from making others depressed (Chino & Funabiki, 1984), or appear within a confused tangle of desires finding expression in extranormal fashion in perversion (Nachlin, 1983). Other times, joy appears to arise from contradictions such as in the appreciation of Blues music, which attempts to reawaken the joy of survival while mocking the delusions of wish (Willeford, 1985). Not only does the research literature fail to recognize these different distinctions in the phenomenon of joy, but the literature lacks integration of these diverse and variegated meanings and dimensions of joy as well. Though a unitary conception of the phenomenon of joy may be possible and perhaps even desirable, this issue nonetheless, has not been well thought out or researched. For the most part, the conception of joy in the research literature is a blunt block of something positive.

Criticism of the unitary conception taken within the intraspherical research literature on the phenomenon of joy in terms of failure to distinguish and integrate the distinctive components, elements and nuances of joy, raises an interspherical issue as well. The failure to take into account such matters as human values and processes of human development renders the existing research on the phenomenon of joy unsatisfactory on the grounds of neglect of the major work being done in other disciplines, particularly the research literature in social biology wherein issues of human value and process of development are especially germane. In particular, one of the more difficult problems in the study of human behavior is the phenomenon of altruism, which "is a label applied to any behavior which involves sacrifice for the benefit of another, without hope of reciprocation" (Liebert & Spiegler, 1982, p. 195). The logic of evolution demands that the tendencies of altruism be grounded in underlying selfishness (Barash, 1977). The sociobiological view of altruism accounts instead for behavior that appears to involve sacrifice and considers the occurrence of "true" altruism to be at best rare and adventitious (Liebert & Spiegler, 1982). In accounting for altruism, Wilson (1978) distinguishes between "kin selection theory" and "soft core" mechanisms. The first mechanism holds that altruism is directly proportional to the degree of relatedness, for which Brown (1975) has provided some support for this prediction from field observations. Soft-core altruism, which others (Barash, 1977; Trivers, 1971) have called "reciprocal altruism", holds that help to nonkin occurs to the extent that they are likely to reciprocate aid. Some experimental support for the increase of altruism under conditions of selfishness has been provided by Rosenhan, Salovey, and Hargis (1981) who found that joy (under a state of induced hypnosis) experienced for oneself promoted altruism whereas emphatic joy retarded altruism. In as much as feedback from the helped constitutes an element of reward, Smith, Keating, and Stotland (1989) found that emphatically aroused witnesses offered help reliably to a person in distress only when they expected feedback on the result; when denied feedback, empathic witnesses were no more likely to help than their nonempathic counterparts. In contrast, however, nonempathic witnesses were unaffected by the availability of feedback in deciding whether to help.

Two major thrusts of criticism have been levelled against the sociobiological approach. Critics have found fault with the disciplines scientific conceptual and methodological base and have argued, that because the theory cannot be disproved, it is consequently of no utility (Allen, 1977; Buriam, 1977; Sahlins, 1976). In terms of the discipline's sociopolitical implications, critics have accused it of offenses from sexism and racism to using biological determinism to justifying the status quo (Allen, 1977; Sahlins, 1976). Although not specifically aimed at sociobiology, Kaufmann (1960) has been severely critical of philosophies based on the element of reward on the grounds that reward negates genuine self-sacrifice. Consistent with the view of Kaufmann (1960), the theory of positive disintegration contains no element of reward as being contingent to the experience of joy in altruistic behavior or empathy in general. It is thus consonant with the Buddhist concept of sympathetic joy (Kornfield, 1985) and Vande Kemp's (1990) idea of the soul as the capacity for imagining pain and joy, as well as Darwin's

(1927, 1952) theory that people propagate their own kind of personalities not through their physical children but through their ethical children.

Related to the idea of empathy-altruism is the problem of teleology, the question of why evolution moves toward even increased complexity, which Christian (1977) considers as "perhaps the most difficult issue in evolution" (p. 441). Various thinkers have affirmed the teleological concept of evolution, such as Sir Julian Huxley (1953), Rene Dubos (1962), and Henri Bergson (1911). For Nietzsche (1964) evolutions sublime destiny is to produce a superior being, an "übermensch (overman)." Similarly, Rychlak (1977) proposes that psychology now accept the fact that certain behaviors are telic. The question of where evolution is going, however, remains unresolved. Nonetheless, evolution is future - oriented and it advances toward increasing complexity and qualitatively higher levels of life (Christian, 1977). According to Pollard's (1972) interpretation of Darwin, "the disciples that an altruistic person [a higher order of life] can create, even in a short lifetime, are much larger number ... than the children that a selfish man can father" (p. 228). While the research literature gives reference to such experiences as the joy of children, the idea of parenting one's ethical children warrants closer research consideration. The joy experienced from partenting one's ethical children requires inclusion of the idea of goodness, and this aspect is truly on the frontier of research.

The contaminating effects of retrospective bias is a fifth problem with current investigations in the literature. Memory, perception and response tendencies figure so prominently in the data of self-reports and retrospective studies (Eysenck, 1988; Schroeder & Costa, 1984) that these factors alone could easily account for existing findings. In Eysenck's (1988) view only prospective studies can surmount this vulnerability to error. An essential requirement thus arises, i.e., for adequate measurement. Most of the current research literature on the phenomenon of joy has, to now, been based on inductive interference, which is fraught with the painful problem that induction is never fully justified logically (Campbell & Stanley, 1966). Since generalization involves extrapolation into a realm not represented in one's sample (Campbell & Stanley, 1966), it is essential that external evidence be accumulated that circumvents the guesswork of generalization. At this point, no standardized instrument exists to measure the phenomenon of joy which includes the idea of goodness in its definition. Removal of this deficiency is an essential first step in meeting the methodological challenges inherent in this topic area. In addition, the provision of a standardized instrument will assist in providing a much needed foundation for comparing cross-sample findings which is a mandatory ingredient in meeting the repeatability criterion (Campbell & Stanley, 1966) in all sciences.

The absence of validity evidence for the presumed advantages of experiences of joy constitutes a sixth reason why the existing literature is unsatisfactory. Not only is the presumption that the experience of joy is inherently and globularly positive without experimental documentation, but the caveat of disadvantages to joy has been rarely considered. In this context, an old adage in medicine (that one most know what a rare disease looks like in order to diagnose it) is extendable to the study of the phenomenon of joy -- i.e., one must know there are disadvantages in order to commence the type of research necessary to detect them. Three areas of study have received some attention with respect to the relevance of joy, all of which have been approached within the assumption of only positive properties to the phenomenon of joy: (a) general health; (b) alcohol, drugs and substances of abuse; and (c) medical, psychologic and psychotherapeutic considerations. Though the findings to date offer an indication of the relevance of the phenomenon of joy in these domains, the paucity of research renders them at best preliminary findings, and the caveat of failure to examine these domains in the context of disadvantages remains in effect. Notwithstanding these caveats, the existing research has produced some interesting observations between the phenomenon of joy and various sociomedical dimensions. These findings are separately reviewed in each of the respective domains identified above.

2.3.1 General Health

Most of the existing research on the phenomenon of joy has been focused on studies designed to ascertain the technical features involved in the recognition of the emotion of joy and distinguishing joy from other common emotions such as, among others, anger, fear, sadness and disgust. Only a scattering of references have emerged which go beyond this first phase of scientific inquiry of understanding a topic area or domain of study to evaluating the implications of existing knowledge or, at least, different perspectives and theories about the phenomenon. About one journal article has appeared per year which combined the phenomenon of joy with the descriptor "health", none of which were experimental in design. Only three quasi-experimental studies were located. The first (Schneidman, 1989) examined joy in living, health and several other dimensions among 45 men (average age 70) from the Terman Study of the Gifted (began in 1921); the second (Thomas, 1986) contrasted Type B (non-coronary prone) with Type A (coronary prone) personalities, the latter of which were found to be in poorer general health and less likely to view life as a joy; while the third Krawczyk (1973) compared egocentric and prosocial orientations between hypertensions and normals, and concluded that nonacceptance of egocentric tendencies may be pathogenic as well as that the ability to experience positive emotions was a sign of good health. The remaining handful of references are expository. Specifically, a few are descriptions of associations of something associated with joy, for example: joy as the result of affect through body-work (Brownell, 1981); the internal motivation of the sheer joy of play and the physiological benefits of better health from choosing a life long sport (Regin, 1983); the beneficial effects of ice cream on people's mental health (Slovenko, 1984); or the promotion of health and joy in seniors centres (Brandler, 1985), and program for the elderly (Kuypers, 1977; Mach & Gorsuch, 1986). At a more theoretical level, a few articles such as Kivley (1988), outline joy as one of the elements in healthily religious beliefs; perceive joy as a state of excruciating aliveness and as an interacting and health giving joy (Duhl, 1986); and describe how communities both support and control individuals through expectations that become either a source of pride, joy, and psychological well-being or a source of despair, distress, and psychological ill-being (Glidewell, 1987). A review of this scattering of studies yields almost no substantial knowledge about joy. At most, these studies reveal a consensus among authors that joy is a relevant dimension positive to health. At present, though, the number of studies is far too few to presume anything beyond speculation of a positive relationship of the phenomenon of joy to health in general. It may simply be the case that the two dimensions are associative and not causal or even interactive.

2.3.2 Alcohol, Drugs, and Substances of Abuse

The research literature specific to the topic of joy regarding the use of a alcohol, drugs, and other substances of abuse is particularly scanty. In their review of the literature on the effects of pleasure and joy on the body and brain, Castrogiovanni, Fornaro, and Neglia (1985) identify only a single firm conclusion -- that there appears to be a relationship between the dopaminergic system and positive emotions. The problems of stress and drug addiction are mentioned and several difficulties in interpreting animal data in research of this motive are outlined. Less than a handful of quasi-experimental studies have appeared in the last decade, and as such, the drawing of any further conclusions appears to be decidedly premature. The work of Janal, Colt, Clark, and Glusman (1984) is singularly noted as meeting, at least, some rigorous experimental procedure by using a double-blind design counterbalanced for drug order (administration of Naloxone) in 12 long distance male runners (average age 38.8 years). Therein joy, euphoria, cooperation, and conscientiousness (as measured through mood visual analog scales) were elevated post-run (6.3 miles). Naloxone attenuated the elevation in joy and euphoria ratings only. Plasma levels of beta-endorphin, immunoreactivity, growth hormone, ACTH, and prolactin were significantly increased post-run. The effects of Naloxone implicated mechanisms of some, but not all of the run-induced alterations in mood and pain perception. Since joy and euphoria have also been identified as effects of peak experience in artists (Yeagle, Privette, & Dunham, 1989) and in running (Privette, 1986), a hint of such a direction in research could be made.

The existing literature, in the main, is expository only. More particularly, Foulke and Keller (1976) proposed the painting of emotion such as anger or joy as an art assignment in a Veterans Administration sponsored addict rehabilitation program in which art played a prominent role. On the other hand, Dohner (1972) has suggested that emotions such as joy, anger, sadness, and dislike need not be stressed in teaching non-chemical ways of handling tension, anxiety, frustration, and fatigue. Some work exists in the area of the use of psychotherapeutic agents and joy, such as the use of Lithium in the treatment of mania or elation (Kerman, 1981); however, the relevance of the phenomenon of joy is tangential to the treatment objective in this type of research literature. The relevance of the phenomenon of joy to concerns about alcohol in studies of therapy groups of adult children of alcoholics is similarly tangential, in that members often viewed any extreme emotion, whether depression or joy, as evidence of lack of control (Cermak & Brown, 1982). In the same view are the findings that probable alcoholic males (using the Michigan Alcoholic Screening Test) reportings of less joy than non-alcoholic groups among patients with sexual disorders (Fagan, Schmidt, Wise, & Derogatis, 1988).

It is clear that the present literature on the phenomenon of joy in relation to the use of alcohol, drugs and substances of abuse is not satisfactory, and a shortage of data-based studies also exist. Dohner's (1972) suggestion made nearly 20 years ago, that constant abuse may reveal delayed or faulty character development is consistent with the position of the theory of positive disintegration (Dabrowski, 1964, 1967, 1970, 1992). This hypothesis needs to be tested empirically. Similarly, the summary view that a major inadequacy in drug abuses is the inability to tolerate frustration, anxiety, tension, mild depression, or other psychological discomfort, and that we need to teach non-chemical ways to handle a certain amount of anxiety, tension, frustration, and fatigue (which is considered necessary for the growth and maintenance of a healthy personality: Dohner, 1972), is also consistent with the tenets of positive disintegration theory. The analytic tools of the model of positive disintegration are especially appropriate to guiding a test of whether or not the direct confrontation of the phenomenon of joy in relation to the use of alcohol, drugs, and other substances, is a more effective strategy than avoidance.

Data is needed to confirm or reject the theoretical assumption that the use of alcohol, tranquillizers, and other drugs and substances is simply a quick solution to the problems of everyday life as Dohner (1972), among others, contend. In terms of a study of the role of joy, only two psychosocial variables (stress and drug addiction) have appeared so far as relevant dimensions in the only major review of the literature (Castrogiovanni, Fornaro, & Neglia, 1985) completed so far. The topical content selected within this investigation (i.e., joy, stress, and substance use) is especially germane and warranted in the context of the present research literature.

2.3.3 Medical, Physiologic, and Psychotherapeutic

Some research has been completed on the relevance of the phenomenon of joy to various medical, physiologic, and psychotherapeutic dimensions, however, the studies are too diverse and too few, as yet, to provide much conclusive evidence. In general, the results of these investigations are preliminary findings. Concerning medical aspects, the amount of expressed joy at baseline testing has been found to be a factor which significantly predicted survival time among patients with a first recurrence of breast cancer (Levy, Lee, Bagley, & Lippmann, 1988). There is some evidence that Type A personalities (coronary prone) are less likely than Type B (non-coronary prone) to view life as a joy (Thomas, 1986); and that hypertensives experiences less joy in general (Knox, Svensson, Waller, & Theorell, 1988), as do children with the attention deficit disorder, as well as those with so called learning disability (Horton, 1988). At present, investigations in physiologic aspects related to the phenomenon of joy are, also, only early findings. Uchiyama, Hanari, Ito and Takahashi, et al (1990) have found that higher levels of joy were associated with high respiration rate but with low diastolic blood pressure, low heart rate, and low frequency of galvanic skin response. Discriminant analysis was able to separate joy from other types of affect. Similarly, Provost and Gourin (1979) found a small deceleration in heart rate among 9 - 12 month old infants for the positive emotions (joy and interest) in situations designed to trigger emotions. Naloxone has been found, experimentally, to attenuate elevation in joy and euphoria ratings; and joy as well as euphoria tend to be elevated in mood visual analog conditions (Janal, Colt, Clark & Glusmannn, 1984).

Horton (1988) has concluded from his experimental study that deficits in the positive emotions (which specifically include the phenomenon of joy) suggest a bi-directionality in parietal cortex dysfunction and parietal neo-cortical activity in children with learning disabilities and attention deficit disorder. Among regular infants, Fox and Davidson (1988), using EEG and the amount of smiles as an indication of joy, found left frontal brain activation associated with their mothers approaching them as compared to right frontal brain activation when strangers approached the infants.

Although there are a number of references in the research literature that relate the phenomenon of joy to psychiatric and psychotherapeutic topics, none of these references are either experimental or quasi-experimental in design. Virtually all these references consider joy as either a goal in psychotherapy processes (Chessick, 1987; Davis, 1989; Enke, 1989; Saltzman, 1981; Vincent, 1987), as an enhancer of therapeutic climates (Saul & Saul, 1990) and well being (Krawczyk, 1973), particularly among the elderly (Brandler, 1985; Kuypers, 1977; Mach & Gorsuch, 1986; Osgood, 1990), or as an adjunct of study of disordered individuals (Cohen, 1989; Trad, 1990). No delineations of the specific mechanisms of the processes of joy has been rigorously attempted through experimental or quasi-experimental designs. For the present, the thinking concerning the relevance of the phenomenon of joy to mental disorder conditions has been confined to theoretical descriptions derived essentially from inductive reasoning about single case examples. An exception to this is the work of Dabrowski and his associates (Dabrowski, 1970; Dabrowski & Darbrowski, 1974; Dabrowski, Kawczak, & Sochanska, 1973), who have undertaken thorough analytic study of a vast array of neurologic, intelligence, and verbal material. Although the phenomenon of joy, particularly Great Joy is included in their studies, the component of joy is not singled out for separate analysis. As such, details of any comparison to other emotional dimensions, as well as associations between the various neurologic parameters and medical conditions is still unavailable for closer scrutiny.

Other than the general work of Dabrowski and his associates as noted above, the study of the phenomenon of joy and its relationship to psychotic conditions is limited to single issues such as: anhedonia (absence of joy) in schizophrenia (Cohen, 1989); an unusual case of disordered affect in a 3.5 year old boy who was consumed with the persistent desire to jump out of a window as therapy progressed (Trad, 1990); a theoretical discussion about delirium in relation to polarized emotions of joy/sadness and fear/anger (Zaimov, 1982); and demonical possession (Grotstein, 1970).

Research evidence concerning neurosis and the phenomenon of joy is scarce as well. Again, the major work in this topic area has been done by Dabrowski and his associates, which although data-based, has only been reported qualitatively. Research by others is generally limited to such theoretical discussion as Grotstein (1979), who contends that neurotic personalities (as well as normal, narcisstic and perhaps borderline personalities) evolve from their fantasies of internal objects -- in short, psychopathology is demonology; and a case study of neurotic sleep disturbance and the prescriptive recommendation that the search for meaning must be directed to the outside world of joy in living rather than to the inner-self and fate (Gall, 1983). Some data-based findings (Santibanez & Bloch, 1986) indicate that among anxiety-neurotic patients, students under hypnosis, and drama students, the subjectivity component in joy/laughter (among other emotions) is modified when the behaviorial patterns of emotions are interfered with, respective to each mimicked emotion. In summary of the research literature specific to the phenomenon of joy and its relationship to neurotic as well as psychotic disturbances and other medical conditions, it is clear that more extensive research is essential before any firm conclusion can be drawn in this domain of enquiry.

A seventh problem with current studies in the literature on the phenomenon of joy concerns the questionable merit of the coping and adjustment viewpoint pertaining to the role of joy in the issue of stress (now being termed strain: Eysenck, 1988). Although popular in the general literature of health psychology, there are a plethora of criticisms, both general (Dabrowski, 1970) and specific to the phenomenon of joy. Because of the immense popularity of the coping and adjustment hypothesis in the equally popular psychotherapeutic and everyday stress domains, various caveats are examined next in further detail.

2.3.4 General Criticisms of the Coping and Adjustment Viewpoint

Perhaps because of the individual's interest in "getting out of" some circumstance or condition, rather than "into it," the terminology has taken on something of a negative hue. Defenses against traumatic experiences have consistently been viewed as unhealthy mechanisms. Dysfunction embodies the idea of "fix it," but just how to fix it represents a major problem. Herink (1980) lists over 250 therapies -- a number alone which suggests redundancy. Characteristic of therapies, whether those described by Herink (1980) or underscored in DSM-III-R (1987) and elsewhere, is the idea of restoration to either the former functioning level of the person (the concept of rehabilitation), or to a theoretical level of normative functioning (the concept of habilitation). A small scatter of articles exist which question the unhealthy ascription to defensive processes (Lazarus, 1979; Monat & Lazarus, 1977); however, exceptionally few models of therapy exist which go beyond a linear delineation of the therapeutic process. Whether by circumvention of the problem as in behavior therapy (Skinner, 1974), in direct restoration (Appleton & Davis, 1972), or in habilitation such as in drug abuse (Gottheil, Druley, Pashko, & Weinstein, 1987), the therapeutic paradigm is one of fix it directly. Although the existential perspective (May, 1967; Yalom, 1980) gives reference to a view of humanity as one larger than the prevailing one, in practice most of the therapist-client relationship is a process of direct fixing. Exemplary of the existential perspective is the frequently cited view of Tillich (1952) that neurosis is a sickness that must be healed, though May (1967) is considerably milder on this assumption than, for instance, other existential therapists such as Bugental, (1965) or Yalom (1980).

A corollary of the unsatisfactory nature of the "fix it" tendency in the general literature is another concern which pertains to the specific modality of coping as a major focus of response to the phenomenon of stress and strain. The idea of coping -- "the ways in which humans respond to stress positively" (Monat & Lazarus, 1977, p. 8), has wide appeal among both clinicians and lay persons. Lazarus (1975) emphasises two categories, ‘direct actions’ (designed to alter conditions) and ‘palliative modes’ (designed to relieve the emotional impact of stress) in his proposal for a taxonomy of coping. Embedded, however, in any taxonomy of coping is the question of whether some coping processes are more effective than others. As Monat and Lazarus (1977) point up "any answer to this problem must be prefaced with a long string of qualifiers due to inherent value questions ... levels of analysis ... points in time ... and particular situations" (p. 9). The intricacies of these qualifiers alone suggests that understanding of coping is a matter fraught with complexities, which the research literature has not even resolved, and which the discerning reader should recognize when possibly considering the validity of the information contained in the extrapolated popular media. Moveover, an issue frequently unrecognized in either the popular or research literature is that the absence of a positive utility of coping (a qualifier) does not mandate neutrality; rather the absence of positive utility may easily extend into a full negative consequence. For instance, making a choice to invest in a particular coping strategy may cancel the opportunity to have made other choices of response, or perhaps in some situations it would have been more beneficial not to have intervened at all. "There is a growing conviction that all coping processes ... have both positive and negative consequences for an individual" (Monat & Lazarus, 1977, p. 11). It is intuitively obvious that any negative consequences must be factored into any calculus of the value of coping.

Beyond questioning the utility of a positively perceived, coping method on the grounds of its intrinsic efficacy, several further lines of questioning arise pertaining to the issue of negative consequences. Firstly, behavior which might be effective from, say the psychological perspective, might have devastating consequences for other domains such as the physiological, spiritual, economical, or sociological, among others. Moreover, within a particular domain, that an optimal response in one situation may be damaging in some other situation, reflects a second concern. Thirdly, palliative modes of coping (especially defense mechanisms) have been viewed as maladaptive, particularly in circumstances where, despite the positive function served, the choice prevents some other essential direct action being taken (Monat & Lazarus, 1977). Fourthly, prematurely promoting either coping strategies in general, or specific choices of strategies of questionable and undemonstrated value, prejudices the scientific study of the condition. Applicable to the concept of coping is a criticism levelled by Feyerabend (1975) against science in general: "Now -- how can we possibly examine something we are using all the time? How can we analyze the terms in which we habitually express our most simple and straightforward observations, and reveal their pre-suppositions? How can we discover the knowledge of world we presuppose when proceeding as we do?" (p. 31).

In as much as intervention of any kind connotes the idea of "treatment" (in its wider meaning), the issues concerning therapy are germane to the concept of coping as a therapeutic intervention. Perhaps the most vociferous criticism of 'psychotherapy' has been proffered by Masson (1988) who asserts "psychotherapy, of any kind, is wrong" (p. ix). In Masson's view the structure of all psychotherapy imposes "acts that are bound to diminish the dignity, autonomy, and freedom of the person who comes for help" (p. ix), irrespective of how kindly the psychotherapist is. In its pejorative sense, Masson's position appears to insert a hyphen into the word "therapist" (the-rapist), or perhaps even goes as far as to leave the space in the hyphen vacant altogether.

Sixthly, the consideration of coping in terms of positive utility, or as negative consequence, ignores the merits (or demerits) of the more neutral position of no behaviorial response whatsoever. The phenomenon of spontaneous remission is replete in the clinical literature, and in this context the lack of response should not suggest a deficiency in the person who chooses or exhibits this mode of response. The parameters of this mode of response (i.e., no response) have yet to be seriously addressed in either the research or popular literature.

A seventh criticism of the concept of coping pertains to the failure to consider various life sequences as continuous rather than discrete events. For instance, White and Mika (1983) question marital disruption research for the presumption reflected in whether to consider divorce and separation as leading to family disintegration (and thus are not family events) as well as considerations that divorce and separation are non-normative events.

A corollary of the above issue raises an eighth criticism of the concept of coping within the research literature, which pertains to the lack of attention given to the topic of disintegration as both a product and a process of many human endeavours. More specifically, the idea of "psychological disintegration" is characteristically perceived with a negative hue. For example, the idea of 'positive disintegration' (Dabrowski, 1964) is noticeably absent in Monat and Lazarus's (1977) view of the possible damaging effects of a 'palliative mode of coping', which "may be damaging when they present essential direct actions but may also be extremely useful in helping a person maintain a sense of well-being, integration, or hope under conditions otherwise likely to encourage psychological disintegration" (p. 10). Much of the research literature can be seriously questioned on the grounds of its very narrow perspective, especially in terms of the low expectation of human resiliency. Any motto such as "cope now -- or soon perish" is simply inappropriate to the scientific study of either coping response and coping strategies, or the parameters of stress and strain as antecedents to the concept of coping in general. A more detailed rationale for use of the theory of positive disintegration (which stands virtually alone in the literature as a theory of disintegration) in examining the phenomenon of joy in the context of both stress/strain and coping is presented in a later section of this paper.

Although Eysenck (1988) has raised the spectre of discussing stress without an account of the importance of personality, his consideration has been in terms of the static properties of personality structure(s) -- such as differentiation between extraverts and introverts. Such personality structures increase the complexity of understanding the effects of stress because of the differences in the capacity of individuals to handle strain. Physical pain, for example, appears to impose less strain on extraverts, while sensory discrimination imposes less strain on introverts (Eysenck, 1967, 1975; Eysenck & Eysenck, 1985). As well, many types of stimuli, experiences and encounters impose less strain on emotionally stable than emotionally unstable people (Eysenck, 1988).

An extension of the argument about differences in personality presents a twelfth reason why the literature is unsatisfactory -- that is, the failure to take account of changes in the personality structure(s) of individuals. Although it is rare perhaps, for a prototypic extravert to change into a prototypic introvert, human history has documented cases of such profound alterations. Within the wide range between the extremes of personality structures are a wide host of individuals who have undergone substantial modifications. An argument can be made that such changes are "social" changes that do not alter the basic biological substrate of an individual, which is the line of reasoning Eysenck, (1988) has followed in accounting for the low incidence of lung cancer in people who give up smoking. Lifestyle risks, however, are a multifaceted issue, and exactly what effects can be attributable to lifestyle, and in turn from changes in lifestyle remain to be deciphered. Nonetheless, there are circumstances where lifestyle does almost surely figure into the antecedents of specific conditions (ranging from strain fatigue and traumatic experiences, to drug and substance abuse).

Nor have focuses on coping strategies (Lazarus & Folkman, 1984; Monat & Lazarus, 1977) been helpful in drawing attention to the importance of personality change. Rather, the case is mostly the opposite. For example, Karl Menninger (1977), writing under a title: "Regulatory Devices of the Ego Under Major Stress", describes both episodic and continuous ruptures of the ego. For episodic disruptions "there is prompt recovery with a continued tendency for them to recur... Rupture of the ego permitting an episodic explosion may be sufficient to relieve the tension, and the ego quickly 'heals' with or without a 'weak spot'" (p. 167-168). Where "the ego may be exhausted or semi-permanently damaged...a further retreat and detachment from reality must occur... Not only is the process of reality testing abandoned, but the established loyalty to reality is (largely) renounced" (p. 169). Despite "the catastrophe of dissolution...empirically we know that complete restoration may still occur!" (p. 171). Even in unretractable cases, where the ego may fail completely, "the ego perennially endeavours to return to its original normal adjustment level" (p. 172). For Menninger, "treatment may be viewed in these terms as assistance in the effort to reestablish the optimal level of integration which had to be sacrificed for a more tenable level of homeostatic maintenance" (p. 173).

Although "there is little coherence in theory, research, and understanding" (Lazarus & Folkman, 1984, p. 117), the concept of coping is still typically equated with adaptational success (Coelko, Hamburge, & Adams, 1974), despite the fact that a reliance on a unicasual perspective has proved inadequate (Monat & Lazarus, 1977), and the call for alternate models has been made (Kessler, Price, & Wortman, 1985).

The homeostatic model (Menninger, 1977), and its precursor in the form of the General Adaptation Syndrome (Cannon, 1939; Selye, 1956; 1974), have contributed to the theoretical base for understanding the physiological adaptations to stress; however, this simple stimulus -- response model has not provided the breakthrough in knowledge that is required. Nor has the perspective of considering coping in terms of personal growth and mastery (Murphy, 1962; Murphy & Moriarty, 1976) altered the state-of-the-art regarding our knowledge of stress and the mechanisms of dealing with strain. The perspective of coping as "constantly changing cognitive and behaviorial efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141-142), has simply redefined the homeostatic model from a passive one to a more active "managing" emphasis, without the required shifting in the paradigm of thought. Similarly, the recent substitution of the Stress-Reduction Hypothesis, conceived to explain the contradictory evidence generated by the Tension-Reduction Hypothesis (Powers, 1987), offers little gain to the present paradigm of thought, which appears to have been exhausted of its heuristic value. The fact remains that the current findings on stress and strain remain inconsistent (Thauberger, 1989), and essentially unsatisfactory (Eysenck, 1988; Kessler, Price, & Wortman, 1985).

A thirteenth reason why the literature on coping and adjustment is unsatisfactory is that much of the research findings have been the products of methodological designs that examined isolated components dissected from the holistic view of what the human being is really about. Much of the research evidence on stress is thus a consequence of a reductionistic philosophy of science (Rychlak, 1968, 1977). While there is a place for investigation of selective features of human individuals, it must be remembered that this is only a part of the full picture of what constitutes the human being. Other disciplines have undergone such scrutiny, for example the analytic model of modern medicine has been criticized by Kimball (1966) for its failure to synthesize the whole (left fragmented by the search for discrete particular) and contends that additional research on the rehabilitative phase of illness is needed. In a more specific sense, Ammon (1985) perceives mental illness as a result of unidimensional limitations as well as disregulation and disintegration imposed on the multidimensional aspects of a person. Cases in point: the hyperkinesia syndrome, which Brocke (1984) describes as regrettable because of its disintegration, partialization, theoretical emptiness, along with continually increasing costs; and, not perceiving the handicapped as humans (disintegration perception) versus an integrated perception through recognition of the capabilities of the handicapped (Cornelissen & McDougall, 1985).

Particularly germane to the concept of personality change, as well as from the perspective of a holistic, non-reductionistic point of view, is the theory of positive disintegration (Dabrowski, 1964, 1967, 1992; Dabrowski & Dabrowski, 1974; Dabrowski, Kawszak, & Sochanska, 1973), which this paper now examines in greater detail both in terms of its descriptive components and as a rationale for use in the further study of the phenomenon of joy in relationship to (a) general health, (b) alcohol, drug and substance abuse, (c) medical, physiologic and psychotherapeutic conditions, and (d) coping with stress and strain.

2.3.5 The Phenomenon of Joy and Specific Issues in Coping and Stress

2.3.5.1 Coping and joy. Several research studies have appeared which have included both variables of joy and the coping or adjustment processes. Generally, these studies were not experimentally oriented, but simply provided theoretical descriptions of events wherein joy was included as a adjunct dimension. For example, Thune-Larsen and Moller-Pedersen (1988) conducted interviews about coping with post-partum birth disturbances. As anticipated joy and happiness were of secondary relevance to the problem at hand. Similarly, although Knox, Svensson, Waller, and Theorell (1988) conclude that emotional coping explained a significant amount of variance in elevated blood pressure, and also found that hypertensives experienced significant less joy, they did not examine the idea of coping with the phenomenon of joy specifically. Other studies have also included the phenomenon of joy but only as a tangential topic. For example, Mack (1984) provided a description of how he coped with cancer wherein he, among other choices, focused on daily activities that promoted laughter, joy, and satisfaction. In like vein, Kline and Meckstroth (1985) were concerned with prescriptive actions that could serve as a preventive function for gifted children, and suggests that a parent could promote the appreciation of the child's intense experience of joy, among other emotions. A more direct description of the role of joy has been provided by Shapira's (1985) historical study of the Hassidim (a Jewish sect) who considered sadness as idolatry, and concludes that their new approach to joy involving the introduction of a devotion in joy and joyous dancing produced moments of ecstasy, lifting the individual to higher worlds. Though interesting in their own right, studies such as those described above provide little of value to delineating the role of joy in either processes of something else, or in the mechanisms of joy as a distinct emotion.

2.3.5.2 Stress and joy. The research literature on the topic of stress and the phenomenon of joy is similar in format to that considered above in relation of the phenomenon of joy to coping and adjustment. In general, the amount of research is scanty, most studies are neither experimental nor quasi-experimental, and the topic of joy, in general, is an adjunct variable. A handful of references exist which include the phenomenon of joy together with stress (among other entities) without suggestion of a direct linkage between the two dimensions. For example, Leland (1976) discusses both entities in terms of ethical considerations and body-work techniques, while Kofodimos (1990) examined the occupational stress of executive career/personal life imbalance in terms of two dichotomies of reward of the job versus the unfulfilling nature of personal life and the joy of mastery verses the threat of intimacy. As might be considered obvious, moderating the drive for mastery and encouraging the capacity for intimacy is proposed. Similarly, Davis (1989) suggests as an aside that art therapy can be joyful and also serve as an outlet for stress in discussing intervention in the grieving process of children. For Shapiro (1986), joy is assumed to exist in pregnancy, however, his descriptions focus almost entirely on alleviating the potential stress that pregnancy may involve in previously infertile couples.

Data based studies examining the relationship between the phenomenon of joy and stress are few. There is some empirical data to suggest that Type B (non-coronary prone) personalities experience less stress as a result of the frustrations of early life and are more likely to view life as a joy (Thomas, 1986). Stress and drug addiction appear to be a relevant factor in the literature on the effects of pleasure and joy on the body and brain (Castrogiovinni, Fornaro, & Neglia, 1975), though Dohner (1972) maintains that joy (among other emotions of anger, sadness and dislike) do not need to be emphasized in teaching non-chemical ways of dealing with psychological stress. Some further research has documented a relationship of joy to a few aspects of specialized medical conditions. Florin, Freudenberg, and Hollaender (1985) found that children with bronchial asthma (aged 7.5 - 12 years) as compared to matched normal controls showed fewer expressions of emotion in a stress inducing condition but not in the joy-inducing situation. Forced expiratory volume at 1.0 seconds decreased significantly as compared to the controls in both the stress and joy inducing situations. A similar finding has been reported in asthmatic children versus matched controls (aged 9 - 11 years) for lower frequency and duration of expressed emotion (enjoyment/joy, anger/rage, and surprise/startle) in a stress inducing competitive achievement situation, as well as a significant negative correlation in the asthmatic group between overall expressed emotion and peak expiratory flow rate (Hollaender & Florin, 1983). The piecemeal nature of such research renders few, if any, conclusions about joy as a phenomenon, and even fewer about any mechanisms that may be involved in stress (strain) in relation to joy.

From a more generic perspective, the theory of positive disintegration subsumes the stresses of life and their accompanying strain, both positive and negative and whether intense or mild, as an essential ingredient in emotional development. The more intense the conflict the more intense and global is the developmental process. This conflict or strain (termed excitability) appears in five forms: (1) psychomotor (movement, agitation, need for action whether trivial or well planned); (2) sensual (surface interaction through sensory inputs of pleasure and displeasure); (3) intellectual (analysis, questions and logic); (4) imaginational (dreams, images, plans never carried out, strong visualization of experience whether direct or from hearsay); and (5) emotional (relationships with others and with oneself, of the despair of loneliness and the joy of love, of the enigma of existence). Only when excitability is strongly exaggerated (termed psychic overexcitability) does it make a significant contribution to development. Psychic overexcitability evolves from conflict inherent in development because different levels of development are incompatible with each other. Development is accelerated when it engages most, or all, of the developmental dynamisms (moving forces of development such as guilt and inner conflict) and functions (expressions of behavior: verbal and subjective as well as non-verbal and non-subjective). As noted earlier with respect to other conditions of medical and psychiatric disturbances, the data base for the theory of positive disintegration is extensive with pool numbers ranging from approximately 80 to over 1,500 subjects depending on the type of test administered. Despite this array of data, analyses have only been reported qualitatively.

Comparisons between the findings contained in the general research literature on stress and those pertaining to positive disintegration theory warrant a closer scrutinizing in light of the differences in definitions used respectively. Stress and its accompanying strain is generally perceived in the general research literature as being of different types. For example, Zimmerman (1983b) has concluded from his review of the literature that negative and positive life events are of different quality. As well, others have argued in favour of separating positive and negative events in studies of life change (Weinberger, Darnell, Martz, Hiner, Neill, & Tierney, 1986) and the relationship of positive life events to illness (Cohen, McGowan, Fooskas, & Rose, 1984; Sarason, Sarason, Potter, & Antoni, 1985; Zimmerman, 1983a). In contrast, stress and its accompanying strain in positive disintegration theory is not similarly differentiated. Rather it is given singular structure (overexcitability) across five modes or forms of occurrence. Although a unitary view for both positive and negative stress (the non-specificity of the stress response) was articulated by Selye (1956) in his early articulations, others have been consistently critical of his conceptualization (Monat &

Lazarus, 1977). A recent study (Thauberger, 1989) however, has found unidimensional structure across 270 life events experiences and perceptions at $R^2=1.00$ fit of the data, which has subsequently been replicated on a separate set of data involving 70 items (Thauberger, Moskalenko-Agar, Paterson, Reddon, & Pagliaro, 1990). About 15 percent of the entries were positive stimuli including specifically the phenomenon of joy. These findings support the approaches taken by Dabrowski (1964, 1967, 1970, 1992) and his associates (Dabrowski & Dabrowski, 1974; Dabrowski, Kawczyk, & Sochanaska, 1973), as well as Selye (1956; 1974). In light of this evidence, the criteria of analysis used in the theory of positive disintegration (i.e., the evaluation of responses in terms of their level of assignment, developmental dynamisms, functions and overexcitabilites as described by Dabrowski (1970, Dabrowski & Kawczak, & Sochanska, 1973) are especially germane to further examination of the relationship between stress (strain) and the phenomenon of joy. Most important to this examination is the position taken in positive disintegration theory that the processes of disintegration (strain and the events from which they protrude are proactive influences to human emotional development rather than circumstances which necessitate coping and adjustment resources).

2.4 Purpose of the Investigation

In summary of the preceding review of the research literature, three major needs emerged upon which further progress in the study of the phenomenon of joy appears contingent. Firstly, the diversity of mechanisms alone wherein joy appears inculcated suggests that some theoretical framework be imposed in order to organize existing knowledge, give some direction to research, and focus criteria for evaluating the plethora of views on the topic. Secondly, a major need in the topic area of joy is for data based studies and empirical documentation of the components, processes and mechanisms. Thirdly, notably absent in the research literature is a supply of tools and techniques suitable to investigating the critical issues in the field. The present investigation addresses all three needs: (a) through formulation of a theory of ontologic joy wherein the critical issues regarding the definition of the term joy are integrated within the postulates of the theory; (b) by delineation of the construct of ontologic joy and setting out a sequential strategy for development of a suitable measuring instrument to assess the construct; and (c) then designing a series of research studies to evaluate both the measuring instrument and the theory of ontologic joy which it is based on.

2.4.1 Rationale

The rationale for this approach to the investigation of the phenomenon of joy was predicated on the observation that empirical evidence in other disciplines, as well as within the discipline of psychology (Rychlak, 1977), indicates that adherence to stringent principles of measurement must be maintained to decipher effectively almost any dimension under study. While the facts or information yielded by data may be only preliminary or even undecipherable within the limits of present methodology, the alternatives of speculation and weak data-based research are wasted efforts, and neglecting research altogether is unsatisfactory. Not only did the review of the research literature indicate a paucity of measuring instruments pertinent to the phenomenon of joy, but no instrument was located that conceivably bore any relevance to a definition of joy wherein the idea of goodness was included within that conceptualization. Moreover, with few exceptions, little research has appeared to date that examined the construction of reliable instruments for the measurement of attitudes, beliefs, feelings, motivations, or behaviors related to joy. The few scales located were narrowly focused, such as the "Joy of Pet Ownership Scale". No general measure of joy was located, nor was a measure of ontologic joy (which is the focus of this investigation). Need exists for such measuring instruments in general, and the construction of such a measuring instrument specifically focused on ontologic joy was selected as the primary objective of this research investigation. In light of the current status of rather weak empiricism in the general area of the phenomenon of joy, the major task of this investigation was to construct an instrument of measurement founded on modern principles of measurement theory, as well as principles of construction procedures, which could assist a rigorous investigation of the issues in the field. Because of the diversity and complexity of measurement issues involved in modern scale construction, a detailed description of the major aspects of the measurement issues involved, as well as the techniques used in this research investigation are examined later in Section 2.5 to assist the reader.

2.4.2 Specific Focus of the Investigation

For reasons outlined by Carmines and Zeller (1979), DeVellis (1991), Messick (1989), and Nunnally (1978), the randomly parallel tests (Allen & Yen, 1979) modification of the classical measurement model (DeVellis, 1991) was selected as the model to guide the investigation. This modified model is consistent with the sequential system of scale construction set out by Jackson (1970, 1971, 1984, 1989) for augmenting scale homogeneity. It is also compatible with current thinking regarding the importance of construct validity in evaluating the assessment of abstract phenomena in the social sciences, both historically (e.g., Cronbach & Meehl, 1955; Loevinger, 1957) and more recent (Allen & Yen, 1979; Anastasi, 1988; Carmines & Zeller, 1979; Cronbach, 1990;

DeVellis, 1991; Feldt & Brennan, 1989; Messick, 1989; Nunnally, 1978). Though it is recognized that other methods of study are useful empirical investigations (Kuhn, 1970), the addition of a rigorous measurement tool is particularly useful to systematic study. The design of the research thus contained four sequential tasks: (1) to construct, according to modern principles of test development, a scale instrument to measure the avoidance-approach tendencies to the phenomenon of joy; (2) to examine the psychometric properties of the constructed instrument in terms of reliability and validity components; (3) to explore the relationship of the avoidance-approach of the phenomenon of joy to: (a) strain values of life events, experiences and perceptions, (b) use of alcohol, drugs and other substances, (c) indices of social functioning and health, and (4) then to evaluate the empirical evidence in terms of the adequacy of the theory of ontologic joy formulated for this investigation.

2.5 Measurement Issues

Measurement theorists generally recognize that scarcely any test is a completely adequate measure of any single trait. Not only are test inventories generally contaminated with random error variances (Carmines & Zeller, 1979), but the content of items frequently overlaps with extraneous content domains as well (DeVellis, 1991; Jackson, 1970, 1971, 1984, 1989; Messick, 1989). Ultimately this circumstance poses immense problems in interpreting what a score on a particular scale subsequently means. Moreover, methodological and stylistic response variance are embedded in many scale instruments used in personality assessment which, in the main, produce either results that are essentially an artifact of the methods employed, or scores that cannot be satisfactorily interpreted. Not only does extraneous variance adversely affect item convergent and discriminant validity (Jackson, 1970, 1984, 1989), but in as much as both convergent and discriminant validity are an integral part of construct validity, such extraneous variance seriously interferes with the accurate measurement of a construct under study (Carmines & Zeller, 1979; DeVellis, 1991; Messick, 1989). As extraneous variance in a scale increases, the precision of subsequent inference tends to decrease correspondingly. In this regard, the plethora of errors in published scales has been considered so numerous that Buros (1972) was prompted to remark: "Test publishers continue to market tests which do not begin to meet the standards of the rank and file of Mental Measurement Year Book and Journal reviewers. At least half of the tests currently on the market should never have been published" (p. xxvii).

Given that the above situation has improved somewhat since Buros's evaluation, the natural question still arises as to how one can determine the extent to which an observable response represents a given theoretical concept. At the most general level, the two basic properties of reliability and validity serve as initial criteria. Reliability pertains to the extent to which any measuring procedure yields the same results on repeated trials, while validity concerns the extent to which the measuring procedure represents the intended, and only the intended concept (Carmines & Zeller, 1979). Within the domains of both reliability and validity there are two basic kinds of errors that affect empirical measurements: random and nonrandom error. Random error is generally understood as the cumulative chance factors that confound the measurement of any phenomenon and is considered inversely related to the degree of reliability of the measuring instrument (Carmines & Zeller, 1979; DeVellis, 1991). Such error is held to be part of the measurement process itself, is unsystematic, and the specific sources for it are numerous (Stanley, 1971). Nonrandom error, on the other hand, has a systematic biasing effect on measuring instruments. Adverse effects on validity arise "when other factors -- more than one underlying construct or methods factors or other unmeasured variables -- are seen to affect the measures in addition to one underlying concept and random error" (Althauser & Heberlein, 1970, p.152). Thus, nonrandom error interferes with an instrument reflecting the theoretical concept being measured (Carmines & Zeller; DeVellis, 1991; Messick, 1989; Werts & Linn, 1970). It is thus appropriate in scale construction to control judiciously the procedures of scale construction at the onset in order to minimize, as much as possible, the intrusion of random and nonrandom error extraneous into the construct of interest.

Both experience and research study provide evidence that reliability and validity are interrelated such that a validity coefficient cannot mathematically exceed the square root of the reliability coefficient (Guildford, 1965). Because of this interrelatedness it is useful, in terms of the accuracy and meaningfulness of measurement, to give cognizance to both components. Notwithstanding this interrelatedness, the properties of reliability and validity have significant distinctions between them -- i.e., the two properties are not interchangeable. For example, a measure may be reliable but not relatively valid, such as in the use of foot-ruler that is only 9 inches long rather than 12 inches. This particular ruler provides an invalid indication of length even though it consistently provides the same results on repeated measures. That a scale can be reliable, however, is not a guarantee that the variable shared by the items is, in fact, the variable of interest to the scale developer.

Perfection in reliability and validity properties, however, is unachievable as both are a matter of degree because of the nature of measurement itself (DeVellis, 1991). The difficulty here is that many of the phenomena in human personality are too abstract to be adequately characterized as either objects or events, but rather "are formulated at rather high levels of abstraction" (Blalock, 1978, p. 6). Bridging the gap between theory and research is thus a matter of "measurement error" (Blalock, 1978, p. 12), in which measurement is a process involving the linking of abstract concepts to empirical indicators (DeVellis, 1991). In terms of application this means the observable response (i.e., a score on a measuring instrument such as an avoidance of joy scale) is interpreted according to the underlying unobservable concept(s). Strictly speaking, "one validates, not a test, but an interpretation of data arising from a specified procedure" (Cronbach, 1971, p. 447). Because a measuring instrument may be relatively valid for one kind of phenomenon but not another, the validation is not of "the measuring instrument itself but the measuring instrument in relation to the purpose for which it is being used" (Carmines & Zeller, 1978, p. 17). It follows that the validity of the Avoidance of Joy Scale be evaluated in terms of both internal and external indications in relation to an avoidance-approach framework within the phenomenom of joy. Each type of reliability and validity takes a somewhat different approach in assessing the extent to which a measuring instrument provides consistency of results on repeated trials, as well as the extent to which it measures what it is intended to measure. Because no single evaluation procedure can capture the full essence of the properties of reliability and validity, several procedures are used in this research to assess these properties.

2.5.1 The Concept of the Latent Variable

Reliability and validity of a measuring instrument, however, are not simply properties with static meaning. Because of the abstract nature of a phenomenon such as ontologic joy it is underscored that such a phenomenon is believed to exist because of theoretical understanding which cannot be assessed directly. Consequently, the theory of ontologic joy, like theories of other abstract phenomena in the social sciences, plays a key role in how one conceptualizes the measurement problems involved. In terms of the dynamic interrelationship among the theoretical constructs, their measurement, and the assessment of the reliability and validity of that measurement, it is helpful to conceive of a measuring instrument as a set of items "whose values are caused by an underlying construct (or 'latent variable')" (DeVellis, 1991, p. 9). Responses to items are thus not an index of what Bollen (1989) terms "effect indicators" (pp. 64-65), but presumably are caused by the construct (DeVellis, 1991). In the case of this research project, presumably more avoidance of ontologic joy causes higher item scores rather than simply influences a person's response to the item.

This distinction is particularly important in the subsequent understanding and delineation of the reliability and validity assays undertaken in this research investigation. In this context, the "interpretation of the data arising from the specific procedures" (Cronbach, 1979, p. 447) employed is important in distinguishing between the measuring instrument itself from "the measuring instrument in relation to the purpose for which it is being used" (Carmines & Zeller, 1979, p. 17). A second utility of this distinction is that it provides a conceptual schema for understanding the relationship between the measure of avoidance of joy and the construct it represents, particularly in terms of the integral relationship between reliability and validity in association with the specific procedures of scale construction used in this research investigation. This schema emphasizes the classical measurement model which assumes that individual items are comparable indicators of the underlying construct.

The interest in this research investigation was the construct of ontologic joy as behaviorally displayed in avoidance versus approach behaviors, beliefs, expectations, feelings, thoughts and so forth, rather than in the items or the scale per se. Following modern thought in measurement theory the underlying phenomenon or construct of ontologic joy can be called a "latent variable" (DeVellis, 1991, p. 12). It is latent rather than manifest, i.e., not directly observable; and, in addition, the construct of ontologic joy is variable rather than constant, i.e., some aspect of it, such as its magnitude, or avoidance and approach of it changes. The Avoidance of Joy Scale was thus intended to estimate the actual magnitude of the theoretical construct underlying the scale at the time and place of measurement for each person participating in the research project. "This unobservable 'actual magnitude' is [considered to be] the true score" (DeVellis, 1991, p. 13). The logic of this understanding is dependent on the premise that the score on the measuring instrument is the reliable estimated magnitude of the latent variable (or construct) after both random and non-random error has been removed.

2.5.2 Assumptions in Classical Measurement

The system of scale development articulated within this research investigation corresponds to the classical measurement model which commences with "common assumptions about items and their relationships to the latent variable and sources of error" (DeVellis, 1991, p. 17). The five crucial assumptions involved are as follows:

1. The amount of error associated with individual items of a measuring instrument varies randomly. This error when aggregated across a sizeable number of persons has a mean of zero and thus item means of a measuring instrument tend to be unaffected by error.

2. The error terms of separate items are not correlated by virtue of their linkage to each other which is through the latent variable and never through the error term. The first two assumptions in the classical measurement model are common statistical assumptions that underlie many analytic procedures (DeVellis, 1991). In this model the logic regarding the "error term" is extended further:
3. Error terms are not correlated with the true score of the latent variable (DeVellis, 1991). This assumption is simply based on the manner in which the error term is defined. By defining error as the residual remaining after all relationships between a set of items and their latent variable have been extracted, it follows that the error terms are not correlated with the true score of the latent variable. Classical measurement theory also assumes parallel tests. Consistent with this logic, the term parallel tests considers scale items from the view that each item of a measuring instrument can be considered as a separate test for the value of the latent variable (Carmines & Zeller, 1979; DeVellis, 1991). This implies that the items in the scale are parallel, that is the items measure a single phenomenon equally. Two further assumptions are thus added to the three listed above regarding the classical measurement model:
4. The amount of influence from the latent variable is assumed to be the same for each item.
5. The amount of error in each item is equal for all items.

The addition of these last two assumptions is important because it leads to a schema of determining the value for each of the relationships between each item and the true score (DeVellis, 1991). These five assumptions allow a variety of conclusions about inferences regarding the latent variable (i.e., the construct of the measuring instrument), based on the correlations of scale items among one another. The classical measurement model accomplishes this feat by setting forth these rather stringent assumptions (Carmines & Zeller, 1979; DeVellis, 1991; Messick, 1989).

Several further advantages arise from the classical measurement model described above. Firstly, it permits the enhancement of reliability and validity properties during the construction phase of scale development as set out by Jackson (1970, 1971, 1984, 1989) and others (Carmines & Zeller, 1979; DeVellis, 1991; Morey, 1991; Watson & Friend, 1969). Secondly, the assumption that "the items in the scale are parallel, which implies that the items measure a single phenomenon equally" (Carmines & Zeller, 1979, p. 59), permits an important determination of the validity of the construct, i.e., the avoidance-approach of joy. More specifically, as Armor (1974) articulates, two conditions arise where real data can violate these assumptions: when the items measure a single construct unequally, and when the items measure more than one concept (latent variable) equally or unequally. As described later in this section, the use of factor analytic procedures can greatly assist in the delineation of the latent variable in terms of the validity of the construct under study as well as determination of any extraneous variance (i.e., other variable such as method variance) embedded in the measuring instrument.

A fourth advantage to this model concerns the effect of violation of assumptions on the conclusions the research is called upon to make. The practical problem of finding equivalent items that are strictly parallel is monumental and thus rare. A consequence of this circumstance would necessitate a halt in scale construction if violation of the narrowly restrictive assumptions were fatal. That all the assumptions associated with strictly parallel tests are not necessary allows for useful inferences to be made about the relationship between true scores of a construct and observed scores of the measuring instrument (DeVellis, 1991). In this regard, the use of a slightly altered model based on randomly parallel tests (Allen & Yen, 1979, does not impose the "equal errors" condition -- i.e., the amount of error variance in a particular item of a measuring instrument need not equal the error variance of the other items (Allen & Yen, 1979). This alternative model (a slight variation of the strict classical measurement model: Feldt & Brennan, 1989) allows the reaching of many of the same conclusions of the strictly parallel tests but with less restrictive assumptions. Thus items can be considered parallel in terms of "how much they are influenced by the latent variable but are not necessarily influenced to exactly the same extent by extraneous factors that are lumped together as error" (DeVellis, 1991, p. 21).

Although some accuracy of inference is yielded by adopting a model of randomly parallel tests, basic adherence to the classic measurement model has "proven very useful for social scientists with primary interests other than measurement who nonetheless, take careful measurement seriously" (DeVellis, 1991, p. 23). In addition, experience with scale development procedures that follow from the classical measurement model have generally yielded very satisfactory scales (DeVellis, 1991). The modified classic measurement model in the form of randomly parallel tests (Allen & Yen, 1978; Feldt & Brennan, 1989) remains more stringent than the congeneric model (Jöreskog, 1971) and is subject to less restrictive assumptions (Carmines & McIver, 1981). In turn, both are more restrictive than the general factor model (Carmines & McIver, 1981; Long, 1983). In the context of comparison to other optional models, the slightly modified randomly parallel tests model, though it is not the only framework available, retains a high level of rigor and stringent assumptions as criteria of measurement adequacy. Because of its conceptual and computational accessibility, wide usage, and allowance for enhancement of reliability and validity properties, the randomly parallel tests variation of the strict classical measurement model was selected as an appropriate and suitable framework to achieve the main purpose of this research investigation, which was to engage deciphering the phenomenon of avoidance and approach of joy.

2.5.3 Extraneous Variances

As emphasized throughout the above discussion, the problem of nonrandom variance poses a continual threat to the delineation of the latent variable of interest. Clarification of the properties of the latent variable (or construct) of interest is clearly assisted when the latent variable is specified in pure form -- i.e., its true value. Confounding the latent variable with either random error or extraneous variance has been usually considered deleterious to interpretation of research results (Jackson, 1970; Messick, 1989; Nunnally, 1978). The general solution to these threats essentially follows the logic of prevention through protection for non-occurrence. In other words, when a measuring instrument is comprised of highly reliable items that are also highly valid with respect to the latent variable of interest, the protection against either random or nonrandom extraneous variances intruding into the measurement operations is greatly increased.

A related issue of interpretation also arises when change scores are considered in subsequent research investigations. The problem for interpretation becomes particularly pronounced in view of the observation that a change in scores may or may not have anything to do with the error-proneness of the measurement procedure

(DeVellis, 1991). For example, as Nunnally (1978) has similarly observed, if a purported measure of depression was influenced by social desirability as well as depression, scores might remain constant despite changes in depression. In this situation, the stable result would not be due to invariance in depression which is the phenomenon of interest. Alternatively, scores on a measuring instrument may change but not the phenomenon of interest due to unreliability of the measuring instrument. As well, changes in scores may be attributed to unreliability of the measuring instrument when the phenomenon of interest has changed but the measuring instrument has not accurately tracked that change (DeVellis, 1991). Instability due to unreliability of the measurement procedure is fairly clear. However, as Kelly and McGrath (1988) point out, three other factors may confound change scores: (1) changes in methods of measurement or in research participants; (2) systematic oscillations in the construct variable under investigation; and (3) permanent change in persons with respect to the construct being studied. Kelly and McGrath (1988) further contend that it is never completely possible to unconfound these factors after the fact with current research methods. In light of the multitudinous sources of threats to validity (Campbell & Stanley, 1966; Cook & Campbell, 1979), it is useful to examine the more pronounced threats with respect to measuring instruments in closer detail.

Although there has been debate on the relevance of response sets in the psychological literature (Block, 1965, 1967, 1971, 1972; Edwards, 1957, 1966; Jackson, & Messick, 1958, 1962; Rorer, 1965), the issue of stylistic response biasing has never been resolved, and thus remains relevant (Bentler, Jackson & Messick, 1972; Block, 1990; DeVellis, 1991; Edwards, 1990; Edwards & Edwards, 1991; Messick, 1989). For example, Wiggins (1964) found the response tendencies of desirability and acquiescence emerged as the first two factors in a factor analytic study of objective personality tests (which included the well-known California Psychological Inventory and the Minnesota Multiphasic Personality Inventory). Similarly, Bentler, Jackson, and Messick (1971) observe that most of the score variance in the Minnesota Multiphasic Personality Inventory can be attributed to these two stylistic response tendencies.

Desirability has been defined generally as the tendency for a person to attempt to appear in a socially favorable light, while acquiescence pertains to a general tendency toward agreement or disagreement. Several researchers have underscored dissatisfaction with the adequacy of measurement and control of stylistic responding (Angleitner & Wiggins, 1986; Bentler, Jackson, & Messick, 1971; Cronbach & Meehl, 1955; De Soto, Kueth, & Bosley, 1959; Foster, 1961; Hanley, 1959; Husek, 1961; Jackson & Messick, 1965; McGee, 1962; Watson & Friend, 1969; Wiggins, 1959). On the basis of the study of response characteristics, both social desirability and acquiescence appear most pronounced when content is highly ambiguous or imaginary (Jackson, 1970; Jackson & Messick, 1958). In light of these findings the accuracy of measurement is improved if procedures are prudently employed in the scale construction process which minimize sources of extraneous variance. This principle of refinement in scale properties was underscored as a guideline throughout the scale construction process in this research investigation.

Although the response consistencies of social desirability and acquiescence present as the major sources of variance contamination to scale content, other potential sources of scale variance arise as a result of the procedures employed in the scale construction process. Herein the use of a large number of provisional scale items gives rise to a potential source of extraneous variance associated with saturation due to a limited content theme among provisional items, and boredom which arises from responding to a voluminous number of items. A person's concentration or attention to the content of items has been recognized for decades as an important aspect of test-taking. A review of the literature reveals little indication of either the preferred number of items specific to a topic or the optimal length of an inventory of items. Work by Thauberger, Ruznisky, and Cleland (1983) indicated that this specific source of variance, however, was of marginal importance. Notwithstanding the issue of whether a particular extraneous variance exerts undue influence in a specific context of an empirical procedure, the necessity exists for maximization of scale validity and reliability. Thus considerable effort was made to minimize the probability of extraneous variances intruding into the Avoidance of Joy Scale.

2.5.4 Principles of Scale Construction

In light of the above discussion, a variety of threats to reliability and validity accompany the process of scale development. The research undertaken for this dissertation tackles these threats rigorously. For the research described herein, precision and accuracy of measurement were especially emphasized in the development of the Avoidance of Joy Scale. In addition, five interrelated principles, as articulated by Jackson (1970, 1971) are conceived to contribute to refined psychological measurement, which in turn enhance both the reliability and validity of the construct or latent variable being investigated:

1. The first guiding principle in the construction of the Avoidance of Joy Scale was that the validation process be integrated with the entire program of scale construction, rather than attempting to delineate the

construct of study from extraneous variances once the scale was in its final form. In order to facilitate this objective of refined psychometric measurement, the sequential procedures outlined by both DeVellis (1991) and Jackson (1970, 1984, 1989) were followed. This system of scale construction involves four additional interrelated principles which are briefly outlined below:

2. A second principle used to guide the scale construction process was that the construct validity of the scale be maximized as much as possible. Following the work of Loevinger (1957), Cronbach and Meehl (1955), Jackson (1970, 1971, 1984, 1989), and others (Carmines & Zeller, 1979; DeVellis, 1991; Messick, 1989; Nunnally, 1978; Watson & Friend, 1969) the classic model of measurement was chosen as the framework to facilitate the maximization of construct validity. Because of the virtual impossibility of obtaining a set of strictly parallel items (where each item is considered as a parallel test which is a requirement of the classic measurement model) a slightly modified version, the randomly parallel test model (DeVellis, 1991; Feldt & Brennan, 1989) was adopted. Explication of the justification for adopting this modified version of the classic measurement model was articulated in an earlier subsection of this chapter.

The utility of the classic measurement model as a guide to research has been further articulated by Jackson (1970) in terms of a sequential system for maximizing scale homogeneity. In one way or another each of the different types of validity (content, concurrent, predictive, factorial and construct) are relevant to the specification and explanation of a single latent variable. Theoretically it is possible to link more than one latent variable together, and a variety of interesting theories can stem from this kind of conception. The purpose of this research investigation, however, is concerned with the delineation of the construct of ontologic joy. It may be the case that the conception of joy is multifaceted in general and the conception of ontologic joy evoked by goodness is an idea of little utility. This research attempts to clarify that possibility.

3. Underscored in the sequential procedure is the principle that psychological theory be used for directing the empirical research. Given the selection of the theory of ontologic joy, the next phase involved developing an instrument reflective of the content domain. The content of items must, in addition, be consistent with the construct of ontologic joy. A collection of items may constitute a measure, however, the content may not reflect the latent variable (or construct) assumed by the investigation. Although content validity is an important component in evaluating the adequacy of a measuring instrument, because of the inadequacies of content validity as well as criterion-related validity (predictive and concurrent), the reliance on these two types of validity alone are thus not sufficient for adequate assessment of validity (Carmines & Zeller, 1979; DeVellis, 1991; Messick, 1989; Nunnally, 1978).

In light of these inadequacies, a major emphasis in the construction of the Avoidance of Joy Scale was the concept of construct validity. No single definition of construct validity, however, completely captures the essence of this type of validity. Essentially though, construct validity is concerned with testing hypotheses derived from the theory under investigation. Cronbach and Meehl (1955) observe: "Construct validity must be investigated whenever no criterion or universe of content is accepted as entirely adequate to define the quality to be measured" (p. 282).

4. As noted earlier, the first guiding principle in the development of the Avoidance of Joy Scale was that the validation process be integrated with the construction of the scale from the beginning. Because extraneous variances hamper subsequent score interpretation, the fourth guiding principle was that stylistic response variance, as well as extraneous variances associated with other latent variables be excluded as much as possible before the scale was in its final form.

5. The internal consistency of scale items implies that each item measures the same underlying latent variable (i.e., are parallel items). Since items with larger magnitudes of internal consistency are more apt to represent a single latent variable, a fifth guiding principle pertained to the maximization of the property of internal consistency. A corollary of the criterion of maximization of internal consistency among items concerns the adequacy of differentiating among persons on the basis of scores represented by the scale items. More specifically the issue of concern

pertains to the scope of the latent variable. Maximization of differentiation occurs where the endorsement of items reaches the 50:50 point (2500 possible discriminations). The location of a set of 20 or more items that possess this level of discrimination is virtually impossible to find in practice. In addition, Jackson (1970) has shown that items with either extremely high or extremely low endorsement frequencies tend to be unreliable and vulnerable to stylistic response biases.

6. Up to this point in the discussion of the construction of the Avoidance of Joy Scale concentration has been placed on principles pertaining to the properties of items that were adjudicable on the basis of their quantifiable characteristics. The principle in this phase of the scale construction process involved a qualitative determination of the characteristics of the provisional items with respect to selection for inclusion in the final form of the scale. Several mechanisms were employed in this regard which are described in the next subsection.

2.5.5 Literature Relevant to the Measurement of the Construct of Ontologic Joy

Several mechanisms are available to assist the processes of refined psychological measurement. Irrespective of what choice of mechanism is used, there are various advantages and disadvantages associated with each choice. The salient issues as well as the corresponding literature pertinent to the topic of joy are reviewed below. Included in this regard are matters of: (1) Scope of content; (2) format of avoidance-approach; (3) bipolarity of content; (4) theory as an external criterion for decision making; and (5) criteria of positive disintegration theory.

2.5.5.1 Scope of content. The wide scope of the emotion of joy does not enhance the ease of its measurement. Not only is there an inherent ambiguity in an abstract concept such as joy, but emotional nuances can be reflected in expression, not reflected in expression, give voice to an enheartening thought and feeling, sometimes give voice to a damning of the world as in protecting the defenseless, or be simply playful. In evaluating the phenomenon of joy, the context of its expression (verbal, non-verbal and sometimes silent) can be a consideration, but often context seems to have no bearing as Wirshbo (1990) has pointed out in relation to the emotional nuances of verbal behavior. Moreover, differences between the participant's experience and the observers interpretation can also contribute to the ambiguity. As well, cultural aspects appear to influence non-verbal sensitivity to interpretations of emotion (Sogon & Masutani, 1989a) despite their correction of error in percentage estimation (Sogon & Masutani, 1989b). Further, additional information appears to be required in identifying the emotion of joy in body movements than for the negative emotions of sadness, anger and fear (Sogon & Izard, 1987). In light of these complexities in the structure and properties of the phenomenon of joy, it is essential that as much precision as possible be brought to bear on this topic area which is greatly in need of evaluation.

2.5.5.2 Format of avoidance-approach. Avoidance-approach styles in human behavior are well referenced in the clinical literature. For example, a popular index of psychopathology: The Millon Clinical Multiaxial Inventory - II (1987), which was designed to coordinate with DSM-III-R categories of personality disorders and clinical syndromes, includes among its subscales the Avoidant (Scale 2) Clinical Personality Pattern (DSM-III-R/Axis II). Specific assessments of avoidance tendencies are also included in the Minnesota Multiphasic Personality Inventory-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) in terms of Social Avoidance which is listed under the Supplementary Scales category; in the Personality Research Form (Jackson, 1984) in terms of Harmavoidance; and the Avoidant Scale (Cluster C) of the Multiaxial Diagnostic Inventory (Doverspike, 1991).

Eysenck and Wurzburg's (1972) definition of avoidance behavior not only provides a succinct description of the type of activity that avoidance behavior entails, but with the addition of a few extra words and concepts, also illustrates the framework of study set out for the present research investigation. In order to facilitate the reader's understanding of both these aspects, the definition of avoidance behavior is reprinted here together with an insertion of brackets [ ] at the respective, relevant locations for the word and ideas added. The numbers entered inside of these brackets correspond to the notations listed following the full text of the quotation. In addition, the reader is appraised that the psychometric scale outlined for construction is actually a bipolar scale involving both ends of an approach - avoidance continuum. The reasons for constructing a bipolar rather than a unipolar scale are outlined elsewhere in the investigation (cf. Jackson, 1970, 1971, 1984, 1989; Loevinger, 1957). It is assumed that the reader can easily make the required extrapolation to the approach component from an understanding of the reasoning and information given regarding the avoidance component. As such, avoidance behavior (with respect to the phenomenon of joy) is defined as:

> Abient behavior, or withdrawal, liable to increase distance [1] between the subject and a goal (a physical object, a social partner or a situation). [2] Barriers on the way to the goal [2] play a part in avoidance. The intensity of the

avoidance behavior is a function of the distance [1] to the goal (avoidance gradient). [3] Avoidance can be a learned reaction to specific situations. It is also to a certain extent explicable as instinctive activity derivable from the "innate releasing mechanism". It is displayed in the motor phenomena of flight (escape) and defense, but is also interpreted as an inner ego-protective process (Freud), as an inner process for removal of possibility threatening cognitive patterns (Lazarus), of specially tabooed words, etc. (perceptual defense, subliminal perception), and for protection against painful and persistent stimulation (J.M. Sokolov). Avoidance in thinking and perception is usually known as defense or defensive behavior. The disposition to avoidance or defensive behavior differs from individual to individual and is mainly diagnosed by the use of projective techniques (p. 110) [4] [5].

Where the meaning of the expanded ideas are as follows:

[1] To now infer "psychological distance" which includes the cognitive, emotional, actional, imaginational, and motivational components in human activity (cf. Dabrowski, 1970; Maddi, 1967).

[2] The specification of "goal" to now include the idea of an "entity" as well, which for this investigation is the phenomenon of joy.

[3] Within the concept of "avoidance gradient" the idea of some embedded continuum or scale of avoidance intensity is connoted. In the present investigation, the idea of a psychometric score being derived from the avoidance-approach of the phenomenon of joy scale is now also included.

[4] Rather than the use of projective techniques, the assessment and evaluation of avoidance-approach of the phenomenon of joy involves psychometric scores obtained from the scale presently being constructed.

[5] The scale construction of the "approach" component is done simultaneously to the avoidance component: In extrapolating to the "approach" component, instead of "distance...". The other linguistic adjustment necessary to convert the language of the quotation to reflect "approach behavior" can be easily inferred by the reader.

2.5.5.3 Bipolarity in content. A first step in the empirical process is to study carefully what are the components of a construct or entity, their properties and structure, as well as their dynamic interactions. Relevant reference works, positive disintegration theory, and the research literature on the phenomenon of joy were perused as information resources to aid in the formulation of a construct of joy, and as a source of content material for the generation of appropriate items for its measurement. In Jackson's (1970) articulation, a fuller comprehension of a construct exists when both poles of the dimension or construct are understood and are definable. For example, the understanding of the topic of love is not understood in isolation of the concept of hate, and both components can be thought of as being along a love-hate continuum. The negation of love does not infer the presence of hate, but simply non-love. Similarly, the negation of hate is simply non-hate. According to Jackson (1970) distinguishing between the bipolar opposite (e.g., love -- hate) and its negation or "opposite instance" (love -- non-love as well as hate -- non-hate) is critical to determining the meaning of a low score derived from a scoring of a psychometric instrument designed to measure a construct. In terms of a bipolar view of the phenomenon of joy, the literature has reflected such bipolarity in terms of two poles of emotions, the other being sorrow (Wallerstein, 1964) or misery involving frustration, loss or sadness. Examination of the sorrow or misery end of the continuum, however, is unnecessary for the purposes of this research.

A second kind of bipolarity, though, concerns oppositional stances pertaining to the value of different strategies of dealing with the phenomenon of joy, which can be considered in terms of approach-avoidance as a generic form. Although agreement on exactly how to conceptualize these two faces of motivations and needs does not yet exist, the topic of approach-avoidance behavior is noted by virtually every personality theorist (Liebert & Spiegler, 1982). It is generally understood that major distinctions among people exist in their motivation structures. For example, while some yearn for power, others fear it (Winter, 1973), and while some strive to succeed because of achievement concerns, others do so out of concern of avoiding failure (Atkinson & Litwin, 1960). One component of being occupied with the meaningful or salient aspects in one's own experience involves the positive or approach tendencies associated with any need or motive. The other component involves avoidance tendencies (Liebert & Spiegler, 1982). An approach response is defined as "any movement toward an object or goal" (Reber, 1985, p. 49), where 'movement' may mean literal (physical movement toward a physical object), or figurative (cognitive, or affective movement towards a way of thinking or feeling about something).

A related issue concerns the bipolarity of feelings to either extremes -- i.e., underreaction and overreaction. Even if one accepts the premise of Protagorus that concerning every topic opposite statements are possible (Rychlak, 1968), the question still remains as to what valuation should be placed on the recognition of such duality. In Rychlak's (1977) view, such duality is one of the important basics underlying the process of dialectic reasoning, which he holds is an essential ingredient for a truly scientific psychology. In contrast, Rollo May (1967) views an overreaction in either direction (i.e., too little or too much) as inappropriate. Yalom (1980) similarly contends that sometimes one needs to look away, especially when meaninglessness becomes overwhelming. Whereas May and Yalom advocate a stabilized state, in the theory of positive disintegration, instability is a necessary mechanism for emotional growth and development. Experiencing extremes as opposites of equal strength, in positive disintegration theory though, is barely a beginning.

The occurrence of joy in paradoxical and contradictory circumstances is also common in everyday examples. Blues music, for instance, by its beauty and energy reawakens joy in survival even though it focuses on the certainty of uncertainty, and mocks the delusion of wish (Willeford, 1985). Other examples involve contradictions wherein there is joy for the survivors, but grief for the death of those not surviving in cases of multiple births where some children die (Sainbury, 1988); and the reverse situation where postpartum depression produces sadness but also joy in the context of the birth of the child (Thune-Larsen & Moller-Pedersen, 1988). While poetry is generally well regarded for its paradoxical mix of joy and suffering (Pruitt, 1982), other admixtures yield deleterious consequences such as: obtaining joy from making others depressed and wanting to be with depressed people (Chino & Funabiki, 1984); expressions of perversion (Nachlin, 1983); and expressing less joy and more negative emotion under situations of jealousy (Bush, Bush, & Jennings, 1988).

Related to the matter of paradoxes and contradictions in the production of joy is the emergence of positive feelings out of negative experiences. While the joy of being alive can emerge from the appreciation of the nature aspects of grief, or as a consequence of allowing more intense grief pain to be exposed and shared (Paul, 1986), such joy in the criteria of positive disintegration theory is of a lower level than the joy emerging from painful experiences, wherein the joy of being fully alive is embedded in the opportunity to experience and create beauty. In this sense, self-sacrifice even to the point of offering one's death in certain circumstance's would be a joy of a higher order. This kind of loving and compassion for another's circumstance can be delineated in terms described by Marburg (1986) of care, responsibility, respect, and knowledge. One's own death in this perspective is no tragedy, as one's death is a fitting end, as Kaufmann (1960) points out, for one who gave all one had to give. This perspective is compatible with the finding by Long, Paradise, and Coleman (1978) that joy elicits greater empathy than either depression or anger. That men have been found to feel less joy corresponding to loss of control and power in society (Kaufmann & Timmers, 1985-86) is perhaps a reflection of less emotional development as articulated in the theory of positive disintegration.

2.5.5.4 Theory as an external criterion for decision making. The use of an external criterion to assist in scale construction (Anastasi, 1988) is not new to the theory of measurement; nor is the use of a set of criteria to make judgments about item selection (Jackson, 1970, 1984, 1989). Ordinarily, decisions about keying of scale items follow an informal route of judgment process, wherein the test constructor(s) weigh by reason and inference the score value a particular items can be assigned. There is no logical reason why this process cannot be made more objective nor that the decision cannot be made according to a formalized theory. A question thus arises as to what standard(s) can be invoked for that step in scale construction involving the keying of items. Recent work on natural categories suggests a framework for conceptualizing people's knowledge about emotions (Shaver, Schwartz, Kirson, & O'Connor, 1987). Categories of natural objects or events, including emotions, are formed as a result of repeated experiences and become organized around scripts or prototypes (Rosch, 1978), which might be used to investigate the processing of information about emotional events, cross-cultural differences in emotion concepts, and the development of emotion knowledge. According to Shaver et al. (1987), the interrelated set of emotion categories becomes organized within an abstract-to-concrete hierarchy. At the basic level of the emotion hierarchy are concepts of love, joy, anger, sadness, fear and perhaps surprise. Extension of the use of natural categories as a criterion in decision making is readily apparent, as is the extension of the component of development of emotion knowledge to the area of development of emotions themselves. The formulation work for this extension has already been completed by Dabrowski (1964, 1967, 1970, 1972; Dabrowski & Dabrowski, 1974; Dabrowski, Kawszak, & Sochanska, 1973). Use of the criteria from the theory of positive disintegration for decision making is warranted on empirical grounds in light of the Shaver, et al. study.

A major reason for use of a molar theory (such as the theory of positive disintegration as a source of criteria for decision making in the keying of items) is appropriate on the further grounds of consistency with the specifications of the construct to be measured. Not only does the phenomenon of joy retain numerous dimensions of experiences, events and perceptions, but the casting of the phenomenon of joy in terms of approach and avoidance tendencies, wherein the element of reward is excluded and the idea of goodness included in the definition of joy (across cognitive, emotional, behavioral, motivational and imaginational components) renders non-molar perspectives inadequate. From a theoretical standpoint the use of a molar theory as a criterion in decision making is also warranted on the basis of several related points as follows: (a) a molar theory by incorporating explanations that are within a person, is a way of explaining those changes in a person that cannot readily be explained by external forces alone; (b) a molar based explanation typically connects a specific behavior to a more general disposition; (c) a molar theory of behavior usually implies a goal and the possession of knowledge about specific mean-end relationships; (d) the molar perspective gives rise to predictions of how a person will behave in other situations. It also defines the boundary lines of what has been observed. For example, if a person has rejected a certain movie, one can predict that the person probably will not embark on seeing it; (e) under some circumstances a molar theory enables one to anticipate an entire sequence of behavior; and (f) a molar explanation is not bogged down by habit and stylistic factors, which are characteristic of molecular explanations. Such molecular explanations can be utilized where a more detailed study is desired within a molar point of view. However, molecular theories in themselves are the end-point of a particular enquiry.

While it is recognized that the major thrusts in the study of personality (psychoanalytic, phenomenological, behavioristic, and dispositional) are alternative paradigms for the study of personality, each with various assets and liabilities (Liebert & Spiegler, 1982), the theory of positive disintegration was chosen as the model for a standard for assessment of the phenomenon of joy for several reasons: First, the theory of positive disintegration currently represents the only major theory of emotional development. Second, it includes the ethical component of what ought to be, rather than simply whatever happens, happens in the objective tradition. The inclusion of the idea of goodness in the definition of joy provides an important linkage to the matters of ethics, though the inclusion of ethics may initially be seen as a weakness to scientific enquiry. In this context, however, even the Scientific Method contains principles about the degree of belief, for example, one ought to give a hypothesis in the light of a given body of evidence. Further, a molar theory is cross-disciplinary. Within the scientific discipline of biology, for example, Darwin (1926, 1952) has theorized that humans propagate their kind of personalities through their ethical personalities. As well, there are various sociopolitical implications to all scientific disciplines, most of which are based on ethical considerations. A holistic or molar science of humanity necessitates the incorporation of the ethical domain, and in this regard the theory of positive disintegration is one of the first major theories of holistic development to integrate ethical dimensions within the mechanisms described by the theory, rather than attempt to attach ethical dimensions on to the end of a theory as an after-thought or consideration. Further, the exclusion of value-laden words and value-judgments from the study of humans does not mean that such variables cannot be discussed. Much of human activity involves judgment of values, but such judgments need not limit the use of independent standards of relevance, or that logical evaluations about the strength of evidence and the validity of inferences will not be engaged less rigorously (Bullock & Trombley, 1988).

Third, the theory of positive disintegration represents the only major theory of joy currently existing, for which principles of analysis have already been developed. Fourth, positive disintegration is not embroiled in paradigm clashes characterizing most proponents of various approaches (cf. Katahn & Koplin, 1968) who insist others have defined the problem incorrectly. The theory of positive disintegration meets the criterion of having its own theoretical structure (which is a criticism many theories cannot meet) and thus, in the sequence of science (cf. Kuhn, 1970) can refine and extend the theory according to established traditions of science. Fifth, the theory of positive disintegration represents the only major theory of development which provides some accountability and integration of the conflicting views about altruism, for instance Wilson's (1978) kin selection theory and reciprocation. Sixth, the theory of positive disintegration, because of its open-ended hierarchy, is futuristic and as such, able to integrate the major issue of evolutionary teleology, which according to Christian (1977) is perhaps the most difficult issue in evolution -- i.e., the issue of a goal to develop increasing complex forms of life. In the same vein, the theory of positive disintegration is also compatible with other theories in philosophy, theology, and the social sciences which view human motivation in terms of a higher order of human accent.

A seventh merit of the theory of positive disintegration as a tool for making decisions about the keying of the provisional scale items is that of compatibility with the principles of empirical research. Not only is the theory molar, and thus can be used to guide research, but it is a framework for organizing the multifaceted processes of emotional development. As a hierarchical theory it serves as a standard for assessing human aspiration. Its methods are analytic and can thus be a useful objective tool in making decisions. In addition, an eighth merit is the compatibility with veiwpoints that are non-secular, not contaminated with the reward element, and are rigorous -- i.e., do not view human activities as either just happening or, when not to one's liking, must be fixed.

2.5.5.5 Criteria of positive disintegration theory. The two volume work on Multilevelness of instinctive and emotional functions (Vol I: Dabrowski 1970, Vol. II: Dabrowski & Piechowski, 1972) provides a detailed description for analysis of essay material, through the procedure of breaking such material into small units and evaluating each unit separately on the criteria of the theory of positive disintegration. By this procedure the terms of the theory are tied to concrete expressions of behavior. In this procedure, atomization of the material into the smallest possible response units cancels out the effect of indeterminancies due to such hazards to reliability such as memory loss. The rationale is similar to that for precision of weighing on a two-arm swinging balance. Repeated weighings give a more accurate measure. In the analytic procedure of positive disintegration, more points for measurement are taken on the development space of a subject which, in a sense, is similar to an approach of developmental topology, or the use of the same data for R and P type factor analysis. For the purposes of the present investigation, the same criteria for analyzing content in the theory of positive disintegration (Dabrowski, 1970) will be employed, only that in this case the material will be restricted to the content items of joy, and no scoring tabulations need to be made.

CHAPTER III

METHODS AND PROCEDURES

3.1 Introduction

The major objective of this research investigation pertained to the development of Avoidance of Joy Scale according to modern practices of scale construction. Within this investigation, a sequential strategy similar to that proposed by DeVellis (1991), as well as Jackson (1967, 1970, 1971, 1984, 1989) was followed to guide the process of scale construction. The degree of success of the strategy followed was held to be determinable through standard techniques of assessing the psychometric properties of the resultant Avoidance of Joy Scale. As well, the details regarding this assessment of reliability and validity of the measuring instrument are outlined in this Chapter.

Within this context, an important criterion used for judging the psychometric properties of an instrument of measurement is the adequacy of its convergent and discriminant validity (Anastasi, 1988; Campbell & Fiske, 1959; Cronbach, 1990). Jackson (1970) has demonstrated that these psychometric properties can be enhanced if various procedures are employed during the sequence of scale construction rather than attempting to attach such properties to a scale once it is in its final form. Not only must an instrument of measurement yield scores that are satisfactorily reliable but such scores should be meaningful and interpretable. As such, the thorough study of the construct under study, decisions about the content of generated provisional items, and procedures for evaluating the selection of items are important considerations. Jackson (1970, 1971, 1984, 1989) and DeVellis (1991) have both described the series of steps to accomplish these objectives, the results of which have been adjudicated as being markedly successful (Anastasi, 1988).

Especially germane to the convergent and discriminant properties of an instrument of measurement is the shaping and keying of scale items to reflect the construct or particular perspective of the phenomenon being studied. Scale items, if they are to subsequently reflect convergent and discriminant validity properties, must reflect intrinsically the construct which they are purported to measure. Not only on intuitive grounds, but experience with the variance(s) of data distributions demonstrates that the variance of scores overlap across the variables in most validity studies, which in turn, subtracts substantially from subsequent interpretations of the results obtained from standard statistical analyses. For this reason, it is crucial that care be taken at the beginning in order to address the variety of measuremental issues that arise in the process of scale construction.

3.2 Hypotheses

Since the primary purpose of this research was to construct a scale pertinent to the phenomenon of joy, the major hypotheses were experimental rather that statistical. For the component of the study which involves the testing of the scale in predicting the strain of life stress, substances use, as well as other social and health related indices, two statistical hypothesis were generated. These hypotheses are specified as follows:

Hypothesis 1 (experimental): It is feasible, using the methodology and technical skill described in Chapter III of this investigation, to construct a scale on the avoidance of joy which corresponds to the classical structural model of homogeneity.

Hypothesis 2 (experimental): The scale constructed, as noted in Hypothesis 1, will be independent of content scales measuring the avoidance of death, loneliness and three varieties of rejection, as well as have only minimal overlap with stylistic response variances.

Hypothesis 3 (statistical): There is no relationship between scores on the Avoidance of Joy Scale and measures of criterion-related validity.

Hypothesis 4 (statistical): There is no relationship between scores on the Avoidance of Joy Scale and scores on measures of strain to life stress, substance use, as well as other social and health related variables.

3.3 Materials

3.3.1 Provisional Items (Joy)

1. Provisional items for the Avoidance of Joy Scale (528 in number) were all in a true/false for me format, of which one-half represent the approach (confrontation) end of the avoidance-approach continuum

(see Appendix: A1). For purposes of controlling acquiescence, one-half of each of the avoidance and approach items were worded in the negative direction. All items were screened for freedom from the reward element, meeting all the criteria of positive disintegration theory, for reflection of avoidance or approach tendencies, and for consistency with the theory of ontologic joy. The features of these conceptions were outlined in Chapter II of this research investigation. It was anticipated that many of these items would not survive the initial statistical criteria. As such, the number of remaining items for use in the subsequent procedures of scale construction would be less than the number of persons in the study, thus meeting the $n_i < N$ statistical criterion necessary for such methodological designs.

3.3.2 Measures For Control of Response Variance

The following scales were used as control measures of stylistic response variance as per procedures set out by Jackson (1970), as well as DeVellis (1991):

2. Infrequency Scale (Jackson, 1967) is a 20 item scale in True/False format designed to detect poor language comprehension and careless or non-purposeful responding.
3. Social Desirability Scale (Jackson, 1967) is a 20 item scale in True/False format designed to measure the stylistic response variance of social desirability.

4. Repression Scale (Welsh, 1956) is a 40 item scale in True/False format which was found by Wiggins (1964) to be a marker of acquiescence.
5. Satiation Scale (Thauberger, Ruznisky, & Cleland, 1983) is a 20 item scale in True/False format designed to measure the stylistic response variance of boredom or satiation associated with the task demand of completing a large inventory of items (see Appendix: A2).

3.3.3 Measures For Control of Extraneous Content Variances

The following scales were used as control measures of extraneous content variances as per procedures set out by Jackson (1970), as well as DeVellis (1991):

6. Avoidance of Loneliness Scale (Thauberger, Ruzinsky, & Cleland, 1981). This scale is a 20 item scale in True/False format designed to measure the avoidance-approach tendencies toward loneliness (see Appendix A:3).
7. Avoidance of Death Scale: Form B (Thauberger, Ruzinsky, & Cleland, 1981). This scale is a 20 item scale in True/False format designed to measure the avoidance-approach tendencies toward death (see Appendix A:4).
8. Ruzinsky Rejection Scales (Thauberger, Ruzinsky, & Cleland, 1981). These three scales are each comprised of 20 items, in True/False format. The scales are designed to measure rejection of self, rejection of others, and rejection by others (see Appendix A:5).

3.3.4 Measures of Validity

These scales and inventories were used in a series of studies to assess the validity properties of the Avoidance of Joy Scale. The specific operations associated with the assessment of validity are set out in more detail in Section 3.6 of this chapter. A listing of these tests is as follows:

9. Concurrent Validity Items (see Appendix A:6). These items were generated to assess the concurrent validity of the Avoidance of Joy Scale being constructed as part of this research investigation. All items are in single rating format.
10. Scores on a variety of published tests included in the extant database were accessible for use in a factorial assessment of the construct validity of the Avoidance of Joy Scale (see Carmines & Zeller, 1979; DeVellis, 1991 for specific details of the rationale involved in the use of factor analysis in this context). Available data in this regards included the:
    a. Eysenck Personality Inventory (Eysenck & Eysenck, 1964): Measures include Extraversion, Neuroticism, and Lie.
    b. Eysenck Psychoticism Scale (Eysenck & Eysenck, 1976): Measures include Extraversion, Neuroticism, Psychoticism, and Lie.
    c. State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970): Separate measures of State and Trait Anxiety.

d. Purpose In Life Test (Crumbaugh & Maholick, 1964): Measure of boredom with life.

e. Avoidance of Existential Confrontation Scale (Thauberger, Ruznisky, & Cleland, 1981): General measure of approach avoidance to existential-ontological issues.

f. Internal/External Locus of Control (Rotter, 1966): Measures of Internal versus External sources of control.

g. Sensation Seeking Scale: Form V (Zuckerman, 1979): Measures include Thrill and Adventure Seeking, Experience Seeking, Disinhibition, and Sensation Seeking.

3.3.5 Other Measures

Several measuring instruments were also included in the database for the purposes of exploration of relationships where virtually no research currently exists with respect to the phenomenon of joy. These measures include:

11. Social and Health Related Items (see Appendix A:7). These items were generated to explore the relationship to the Avoidance of Joy Scale currently being constructed. All items were in single rating format. The number of the response category was used as the score value for the response made by the research participant.

12. The Inventory of Substance Use (Thauberger, 1989) is comprised of 36 items ranging from tobacco to heroin (see Appendix A:8). Both prescription and non-prescription substances are included. Participants

are requested to respond to each item according to ten choices arranged hierarchically from (1) never to (10) several times a day. The number of the choice made was the score value.

13. The Inventory of Life Events, Experience and Perception (Thauberger, 1989) is briefly described as follows: It consists of 270 items (see Appendix A:9) pertaining to life events, experiences and human conditions which may, according to varying degrees of intensity, cause stress, fear, concern, or upset to a person. Participants are requested to evaluate each of 269 items as personal stress or concern against a reference point of an Appendectomy arbitrarily given to a value of 500 units. The term 'stress' was used in the language for administration in preference to the term 'strain' because of its more common understanding in English language usage. Individual scores are obtainable for each stimuli item. The inventory is interpretable in unidimensional structure of $R^2 = 1.00$ fit of the data (Thauberger, 1989; Thauberger, Moskalenko-Agar, Paterson, Reddon, & Pagliaro, 1990).

14. Biographical Data Sheet (see Appendix A:10). This brief biographical data inventory was included for the purposes of obtaining information about such routine characteristics as education, gender, age, and income. This information was used for summary descriptions of the sample.

3.4 Data Collection

All data examined were extant and had been collected under conditions of anonymous participation. Questionnaires were distributed to interested volunteers by acquaintances of the investigators. Participants were volunteers from professional and non-professional businesses, organizations, agencies or educational facilities in midwestern Canada. An honorarium of ten dollars was paid for each returned questionnaire irrespective of whether the inventory was fully completed or not. No identification marks were attached to the questionnaire. The data collection procedures included in the full database have passed the Ethics Review Committee for research with human subjects (University of Alberta, Department of Psychology, 1986). The analyses on data drawn from the database for the present investigation have passed the Ethics Review Committee for research with human subjects (University of Alberta, Department of Educational Psychology, 1991).

3.5 Sample

The database for this research was 416 extant protocols of previously unanalyzed data which were collected in conjunction with a separate study on construction of guilt and meaninglessness scales. In the database sample are 159 males, 249 females, plus 8 individuals without recorded gender. Ages range between 16 and 83 years; median age was approximately 28.0 years. Because of the breadth of the scales included in the overall database, complete data does not exist for all participants across every scale included. Of the 416 respondents, 47 protocols were excluded from use in any further analyses due to failure to complete the questionnaire comprised of items for use in construction of several different scales. For the purposes of this specific investigation a further 67 protocols were eliminated from further analyses based on a cut-off score of four on the Jackson (1967) Infrequency Scale which is a measure of non-purposeful responding due to carelessness, inattention or poor language comprehension. A further 14 protocols were eliminated because of missing values (≥ 15 items) in the main research questionnaire which reduced the sample to 288 intact protocols. The specific demographic breakdown of ten demographic categories is presented in Table 3.1.

Further to the purposes of this investigation the above sample was divided into two developmental samples (see DeVellis, 1991 for a discussion of the rationale involved). For the purposes of item evaluation, the first sample (labelled Standardization Sample I) was comprised of 100 male and 100 female protocols. The male portion comprised the total number of available protocols remaining after the above noted exclusions were enacted. For the female portion 100 protocols were selected from the number of available protocols after exclusion (N = 188) according to a random sampling based on sequential case position within the database. The remaining protocols (all females: N = 88) were assigned to a cross-referent sample (labelled Standardization Sample II). Demographic characteristics of this Standardization Sample are provided in Table 3.1. A sample of individuals (N = 27) contained within the database had scores completed across two administrations (two weeks apart) of the pool of provisional items. In this sample were 19 female and 8 male participants (median age was approximately 22.0 years). Demographic characteristics of this sample (labelled Standardization Sample III) are also

Table 3.1

Summary Characteristics of Ten Demographic Categorizations of Research Participants

Source	Number of Participants in Standardization Sample[a]					
	I N=200	I_m N=100	I_f N=100	II N=88	III N=27	IV N=35
Age (in years)						
16-20	29	13	16	13	9	10
21-25	52	20	32	28	13	10
26-30	47	31	16	16	1	5
31-35	26	13	13	13	2	1
36-40	10	5	5	7	0	2
41-45	10	4	6	1	1	1
46-50	5	5	0	1	0	1
51-55	5	2	3	2	0	0
56-60	4	1	3	3	1	1
61-65	6	2	4	2	0	0
66-70	1	1	0	1	0	0

	Number of Participants in Standardization Sample[a]					
	I	I_m	I_f	II	III	IV
Source	N=200	N=100	N=100	N=88	N=27	N=35
71-75	2	1	1	0	0	0
unrecorded	3	2	1	1	0	4
median	27.0	28.0	26.0	26.5	22.0	23.0
Gender						
female	100	0	100	88	19	17
male	100	100	0	0	8	14
unrecorded	0	0	0	0	0	4
Ethnic Origin						
English Canadian	132	70	62	59	19	22
French Canadian	5	1	4	7	1	0
Other Canadian	18	9	9	0	0	0
Metis	3	2	1	2	0	0
Other	39	16	23	0	5	9
Unrecorded	3	2	1	20	0	4
Marital Status						
Single	78	34	44	38	22	24
Married	103	59	44	44	4	3
Widow(er)	2	1	1	1	0	0

	Number of Participants in Standardization Sample[a]					
	I	I_m	I_f	II	III	IV
Source	N=200	N=100	N=100	N=88	N=27	N=35
Separated	9	1	8	0	0	0
Divorced	7	4	3	4	1	3
Unrecorded	1	1	0	1	0	5
Educational Level						
Elementary School	7	3	4	2	1	0
Part Secondary	26	11	15	12	1	0
Grade Twelve	33	15	18	19	0	0
Diploma	16	8	8	10	3	5
Part University	65	30	35	26	16	20
University Degree	38	22	16	13	5	3
Graduate Studies	11	8	3	4	0	3
Unrecorded	4	3	1	2	1	4
Children						
None	108	54	54	43	23	27
One	24	11	13	15	0	0
Two-Three	47	25	22	19	2	2
Four-Five	8	4	4	6	1	1
Above Five	10	4	6	4	0	0

	Number of Participants in Standardization Sample[a]					
	I	I_m	I_f	II	III	IV
Source	N=200	N=100	N=100	N=88	N=27	N=35
Unrecorded	3	2	1	0	1	5
Religious Affiliation						
Catholic	59	27	32	38	3	2
United	30	10	20	11	3	4
Anglican	13	6	7	6	1	1
Presbyterian	1	1	1	1	0	0
Mennonite	0	0	0	0	0	0
Mormon	36	24	12	10	4	3
None	22	12	10	8	4	7
Agnostic	9	8	1	1	2	2
Atheist	6	5	1	2	4	4
Other	22	7	15	9	5	5
Unrecorded	2	1	1	2	1	7
Geographical Background						
Urban	129	68	61	60	19	20
Rural	65	29	36	28	6	9
Unrecorded	6	3	3	0	2	6

	Number of Participants in Standardization Sample[a]					
	I	I_m	I_f	II	III	IV
Source	N=200	N=100	N=100	N=88	N=27	N=35
Occupation						
Professional	50	31	19	17	4	6
Student	65	31	34	32	16	18
Skilled Labourer	21	20	1	4	2	1
Unskilled Labourer	9	6	3	6	1	1
Clerical	22	3	19	9	2	1
Other	31	7	24	20	1	4
Unrecorded	2	2	0	0	1	4
Income Level						
Less $1,000	23	4	19	19	2	2
$1,000-$10,000	64	28	36	35	12	17
$10,000-$20,000	41	23	18	14	5	4
$20,000-$30,000	43	23	20	12	5	2
Above $30,000	23	19	4	7	0	3
Unrecorded	6	3	3	1	3	7

[a] Demographic characteristics of the female portion of the Standardization I sample (N = 100) have been included in the Table for comparison with the Standardization II sample which is comprised of only female research participants.

presented in Table 3.1. This sample of participants was used to assess the rest-retest reliability of the Avoidance of Joy Scale in terms of the stability relationship between the two administrations.

Further to the above, a fourth sample of a small number of research participants (labelled Standardization Sample IV: N = 35) was comprised of 17 female and 14 male respondents plus four persons with unrecorded gender. Average age was approximately 23.0 years. The demographic characteristics are presented in Table 3.1. This sample of research participants was used to assess several validity relationships with respect to cross-referent scores on the Avoidance of Joy Scale. In consideration of these samples as a whole, some disparities exist across selected demographic variables. These differences are useful for delineating the subsequent distinctions anticipated among selected variables.

3.6 Procedures of Scale Construction

As over 50 different indices of item discrimination have been used in test construction (Anastasi, 1988), most of which provide similar results (Henrysson, 1971; Oosterhof, 1976), the choice of method is considered arbitrary (Anastasi, 1988). However, in light of current thinking about enhancement of psychometric properties (DeVellis, 1991; Jackson, 1970, 1984, 1989; Messick, 1989) a rigorous item selection procedure was adopted for the construction of the Avoidance of Joy Scale. These procedures essentially follow the sequential system set out separately by DeVellis (1991) and Jackson (1970). Variations are noted at the locations where slight deviation arises. Slightly modified procedures are used to further enhance the psychometric features of the Avoidance of Joy Scale in light of current thinking (DeVellis, 1991; Jackson, 1984, 1989) regarding scale development.

3.6.1 Step 1. Theoretical Base

Because the Avoidance of Joy Scale is a type of measure that is intended to assess an abstract phenomenon which cannot be observed directly, it follows that there is no tangible criterion against which comparison of the scale's performance can be compared. However, theory can serve as an important aid in clarifying the boundaries of a phenomenon so as not to inadvertently include unintended content domains within the conceptual framework (DeVellis, 1991). Consistent with this frame of reference regarding measurement of abstract phenomena, the first step in the construction of the Avoidance of Joy Scale was a careful perusal of the different theories available in the topic area. A review of the research literature however, revealed a variety of topographical commentary, but little in the way of theory about joy or systematic research of the phenomenon in general, and a virtual absence of research on the topic of joy as conceptualized within the frame of reference of ontologic joy. Because of the absence of available precursory information, a theoretical model to further guide scale development was conceptually formulated consistent with the general consensus (Anastasi, 1988; Carmines & Zeller, 1979; Cronbach, 1990; DeVellis, 1991; Jackson, 1970; Loevinger, 1957) that a theoretical model be specified in advance of operationalization.

3.6.2 Step 2. Conceptual Formulation

Because of the importance of extending the precision in specification of the construct to be studied (i.e., the complexity engendered by inclusion of the idea of goodness in a definition of joy, and the scope of the phenomenon of joy across cognitive, emotional, behavioral, motivational, and imaginational components, as well as the imposition of several criteria on the keying of the provisional content items), an examination of these aspects was provided earlier in Chapter II (subsection 2.5.5). The review of the literature therein included examination of five aspects: (1) scope of content; (2) format of avoidance-approach; (3) bipolarity in content; (4) theory as an external criterion for decision making; and (5) criteria of positive disintegration theory. This description was given in some detail for reasons of clarification, particularly in light of the inclusion of these procedures for enhancement that were not described elsewhere in the literature on the theory of measurement. As well, the provision of a detailed description attempts to assist the reader in interpreting the meaning of scores subsequently derived from the instrument.

3.6.3 Step 3. Definition of the Construct

Notwithstanding the different components contained in the theory of ontologic joy as outlined in the preceding discussion (i.e., Step 2), a concise definition of the construct of avoidance and approach of ontologic joy was formulated. This construct or latent variable is defined as: the phenomenon of avoidance and approach tendencies toward joy wherein no reward is attached or expected. Within this definition, the dominant principle in the construct is a recognition and acceptance of the human condition without imposing artificial maneuvers to obtain rewards or alternatively escape suffering. Buckley (1966) has provided a concise description of such tenets which include the ability to live with problems of all kinds, to accept limitations, and to accept suffering when inescapable. The direction of meaning follows the contention by Heidegger (1962) and May (1967) that both an under-reaction and an over-reaction are equally untenable. The sense of this criterion is depicted by Moustakas (1961) with respect to loneliness; that is: "there is no solution…but to accept it, face it, live with it, and let it be" (p. 48). In this definitional meaning, joy is its own essence, and simply exists in itself. Within this perspective the first linguistic usage in the English language is retained--i.e., the idea of goodness. Also retained is the idea of joy as delight, elation, happiness or pleasure which are also part of the linguistic meaning of the term joy. Consistent with the general theory of positive disintegration (Dabrowski, 1964, 1967, 1970, 1992), ontologic joy differs from the idea of joy as something to pursue. In other words, ontologic joy simply occurs, and thus is divorced from elements of direct reward or expectation of reward.

In terms of application, this new construct is intended to be applied broadly (as a concept in explaining global patterns of behavior wherein the element of no reward is contained within the phenomenon of joy), as well as narrowly (as a means of predicting how an individual will behave in a specific situation). Although the Avoidance of Joy Scale is apt to relate more strongly to other variables under matched conditions of level of specificity (see Ajzen & Fishbein, 1980; DeVellis, 1991 for a review of this issue), the construct of ontologic joy is conceived to involve general perceptions about influences that are important in shaping outcomes in each person's life. This feature is considered advantageous for different types of outcomes depending on the scientific question being pursued. For example, the Avoidance of Joy Scale can be used to predict a general class of behavior, or to compare other variables assessing constructs at a general level. On the other hand, because the construct of ontologic joy reflects a value structure (see Chapter II, this dissertation), then predicting how beliefs about the influence of ontologic joy affects certain lifestyle behaviors can be more specifically predicted.

A second ingredient in a conceptual formulation (DeVellis, 1991) pertains to the distinction between the construct of ontologic joy from other constructs. As noted earlier, the construct of ontologic joy was conceived as being distinct from a reward view of life as experienced in the emotion of joy. The critical distinction between ontologic joy and other varieties of joy concerns the origin and perception of the emotion rather than the material features of the emotion itself. In other words the essential property of ontologic joy is the causal influence of the response (i.e., the true variance of the latent variable causes this response: DeVellis, 1991) rather than its material constituents. This characteristic is important in distinguishing inferences of the existence of joy through its behavioral consequences from inferences where one cannot rely on behavior as an indication of the phenomenon of joy.

Fundamentally it is important to a scientific investigation to separate a construct from a mere category. Because persons may share issues of concern (e.g., fear of discovering unpleasantries, anticipation of suffering, perceptions of vulnerability and so forth) is a different characteristic of a person than a characteristic that accounts for attitudes. Each issue of concern (what DeVellis terms "barriers to compliance" p. 55), can be construed as separate constructs without necessarily reflecting a single latent variable. In this context, both avoidance and approach tendencies may be construed as categorical responses which are not expected to covary in the same way as manifestations of a common latent variable (DeVellis, 1991). Consistent with the classical model of measurement for scale development, wherein items are regarded "as overt manifestations of a common latent variable that is the cause" (DeVellis, 1991, p. 55), the conceptual formulation of the Avoidance of Joy Scale is that items manifest the specificity of joy rather than only avoidance and approach tendencies. Such conceptual separation was considered feasible for the Avoidance of Joy Scale. Success in this regard has been demonstrated earlier (Thauberger, Ruznisky & Cleland, 1981) in separation of scales designed to measure avoidance and approach tendencies to death, loneliness, and three varieties of rejection (by others, of others, and of self). A test for this separation of the Avoidance of Joy Scale was included in the research design of this investigation.

3.6.4 Step 4. Item Generation

Because the universe of items regarding a particular construct is assumed to be very large, actually identifying the construct through extracting items randomly is precluded. Thus items should be worded to get at the construct without going beyond the boundaries of the defining construct, while still exhausting "the possibilities for types of items within those bounds" (DeVellis, 1991, p. 55). Within that context, a review of the literature on joy was conducted earlier for item material. Various individuals were also consulted for comments regarding the topic of joy. Based on the diversity of materials reviewed and other commentaries, 528 provisional joy items (see Appendix A:1) were generated. An attempt was made to keep the items readable, short and interesting (see DeVellis, 1991; Jackson, 1970 for discussions). Approximately one-half of the provisional items were written to reflect the avoidance pole, while the other half were worded to reflect the approach end of the bipolar continuum.

Within the group of items at each end of the continuum, approximately one-half had been written in the negative direction to minimize the effects of "agreement" type acquiescence. Negatively-worded items had been written to reflect the "opposite instance" (Jackson, 1970), or what is termed the "obverse" in philosophical thought (Beardsley, 1975). Thus a negatively-worded item represents simply the negation of an attitude, feelings or behavior rather than implying its bipolar opposite. For example, not seeking pleasure is quite different from avoiding pleasure. In other words, the negation or obverse of an avoidance of joy item only reflects the negation of avoidance tendencies and does not imply any approach tendency. Distinguishing between the affirmative and its obverse is important to the understanding of equivalency of meaning, and is critical to distinguishing between conclusions logically deduced out of premises from those that are not (Beardsley, 1975). Logical locutions are critical to ensuring that negatively-worded items are consistent with the affirmative form of items representing a construct. As well, consistency of locution is critical to understanding the meaning of a low score on a scale (Jackson, 1970). In other words, when a scale is comprised of only items representing one pole of a continuum, the meaning of a low score is ambiguous in that it is impossible to distinguish between the absence of the characteristic and the presence of its bipolar opposite. This complication is circumvented where scales are constructed such that a low score represents the bipolar opposite of a high score rather than simply the negation of the high score.

While Jackson (1970, 1971, 1984, 1989) and DeVellis (1991) have set out explicit criteria and procedures for most aspects of scale construction, their specifications for shaping the subsequent provisional scale items are less exact. Ordinarily this would not present a problem for construction of scales pertinent to the measurement of most regular personality dimensions (e.g., Jackson, 1984) or scales of adjustment (e.g., Jackson, 1989). Assessment of ontologic joy, however, wherein the idea of no reward is retained in the definition of the construct, and which can also be an experiential emotion (Wallerstein, 1964), a product or an event (e.g., a work of art), or an observation (e.g., facial expression), as well as a criterion of value (cf. Dabrowski's 1964, 1967, 1970, 1992, concept of Great Joy), is more complicated than is ordinarily the case were one simply constructing a general scale covering a spectrum of joyous activities, attitudes to joy, experiences of joy, or the like. In order to enhance the precision of the instrument in terms of its subsequent construct validity, four criteria were superimposed upon the shaping of items:

i. that the item reflect either an avoidance or approach tendency;

ii. that the item be free of the element of reward;

iii. that the item meet the analytic criteria of positive disintegration theory developed by Dabrowski (1970, Dabrowski & Piechowski, 1972); and,

iv. that the item be consistent with the formulated theory of ontologic joy described earlier in this research.

In addition to the above item generations, all provisional items had been previously scrutinized by two reviewers (one male and one female) for editing purposes regarding gender specific and other biases. Items identified from that review were subsequently deleted or reworded. A final check of the items for readability was conducted using Fry's (1977) gauge of readability level. Keeping the readability of items at approximately the grade-seven level not only assists understanding of the average adult but also avoids the necessity for rewriting adult-level items for possible research with younger persons. Such rewriting of adult-level items for adolescent samples tends to alter significantly the psychometric structure of a scale which introduces further problematic issues to interpretation between adult and younger aged samples. By keeping the readability at approximately the grade-seven level, this complication is minimized for possible subsequent use of the Avoidance of Joy Scale.

3.6.5 Step 5. Format

Following the editing of the pool of provisional items, an inventory was assembled comprised of 15 separate scales. In addition to the provisional joy items, several scales were included in the inventory as part of the procedure for either augmenting the reliability of items or enhancing item convergent and discriminant validity (see Anastasi, 1988; Carmines & Zeller, 1979; Cronbach, 1990; DeVellis, 1991; Jackson, 1970; Messick, 1989 for discussions of a variety of issues requiring attention in scale construction). Included were items from the Jackson (1967) Social Desirability and Infrequency Scales; the Welsh (1956) Repression Scale, the Ruznisky Rejection Scales as well as the Thauberger Loneliness and Death Scales (Thauberger, Ruznisky & Cleland, 1981), and a variety of preliminary items pertaining to guilt, anger, boredom, and meaninglessness. All items were interspersed throughout the entire inventory according to the proportion of items comprising each of the respective scales included. The "True/False For Me" format was used for all items because of the practical aspect of minimizing the task demand required of research participants. The shortcoming of a binary response option (i.e., each binary item is limited in possible variances and covariances: DeVellis, 1991) is off-set by the use of more items in the final version of the Avoidance of Joy Scale to obtain the same degree of scale variance than if the items had more individual variability. Research participants typically find binary items easy to answer and are often willing to complete more binary items than items using other formats, and investigators can achieve adequate variation in scale scores by aggregating information over several items (DeVellis, 1991; Jackson, 1970, 1984, 1989). A second operation during this step of the scale construction process involved a judgment of each potential item as to its suitability for reflecting the construct of ontologic joy. The objective to construct a measure of avoidance-approach of joy, despite its complexity, is founded in the premise that individuals will present a reliable approximation of their honest feelings on the basis of conscious consideration of the task given to them (Kotchen, 1970; Crumbaugh & Maholick, 1964). If this premise is incorrect, then low scale reliability and low scale validity should result as evaluated against standard criteria of these two properties of measurement. The task demands for the research participant is made relatively simple, however, by virtue of framing all items in a format that reflects either avoidance or approach of various events, experiences or perceptions regarding joy. This was made feasible by carefully defining the theoretical construct (or latent variable) of what the scale should measure in advance. In essence, the Avoidance of Joy Scale is not an index of experiences or perceptions about joy, but rather a measure of how individuals deal with the phenomenon of joy across cognitive, affective, behavioral, sensory-motor, motivational and imaginational levels. The rationale for this format corresponds to Loevinger's (1957) suggestions regarding validation components each of which is an essential feature in scale development, though each validation component is not sufficient by itself.

A second advantage to the use of the avoidance-approach format for the framing of items pertains to the corresponding operations needed to test the validity of the construct as a whole. As noted earlier, the avoidance-approach framework has been utilized by virtually all personality theorists (Liebert & Spiegler, 1982), and thus a rich literature exists with respect to further understanding the parameters of human activity in less abstruse form than is often the case where purely hypothetical conceptions are investigated. Moreover, the breadth of the measuring instrument is enhanced because of the ease of translation into different kinds of human activity such as cognitions, affections, and behavior (Dabrowski, 1964, 1967, 1970; Maddi, 1967) as well as the motivational, sensory-motor, and imaginational domains (Dabrowski, 1964, 1967, 1970). A further advantage of this format appears in the context of facilitating tests of validation of the "interpretation of data arising from a specified procedure" (Cronbach, 1971, p. 447) rather than the measuring instrument itself. What is gained by use of the avoidance-approach format is a clear and concise criterion that can be easily operationalized for the acquisition of data for evaluating the validity properties of the scale, as well as testing hypotheses derived from the theory of ontologic joy (in terms of evaluating the important property of construct validity). As noted earlier, the use of avoidance-approach scales in research on human functioning and clinical diagnosis is not new. Avoidance scales appear in the Millon (1987) Clinical Multiaxial Inventory-II, the Minnesota Multiphasic Personality Inventory-2 (Butcher, et al. 1989) and the Multiaxial Diagnostic Inventory (Doverspike, 1991). For illustrative purposes regarding the sequential system of scale construction employed for the Avoidance of Joy Scale, the Jackson (1984) Harmavoidance Scale within the Personality Research Form provides a ready comparison. It was thus anticipated that the Avoidance of Joy Scale was feasible and the resultant scale would yield similar properties of reliability and validity.

3.6.6 Step 6. Administration of Items

The instructions for the research participants followed standard directions for completion of the questionnaire and other scales included in the research project. Each questionnaire also contained a specified number of the item where the research participant was requested to commence responding in order to minimize serial order effects from satiation to items, fatigue, or task biases. Numbers were staggered at intervals of 25 items across the questionnaire. Questionnaires were randomly mixed before distribution. A small set of rating items was included at the end of the questionnaire for participants to respond to regarding their attitudes and opinions about completing the questionnaire inventory.

3.6.7 Step 7. Item Evaluation

Following the removal of incompleted questionnaires, the responses of participants were entered into an electronic database. All data were verified. Standard computer programs available in SPSSX (SPSS, Inc., 1988) were used to assist in evaluating the provisional items. Where applicable to the evaluation process, biserial correlations were calculated using a specially designed program adapted for the SPSSX: Userproc procedure.

3.6.8 Step 8. Expert Review

Thus far, the focus of scale construction concentrated on conceptualization of the phenomenon of avoidance of joy, generating a sizeable pool of provisional items, selecting a response format for those items, and deleting those items with extreme endorsement frequencies as well as those items where the overlap of item variances with extraneous scales exceeded the discriminant validity criterion. The next step in the process was to review the items for confirmation of the definition of ontologic joy. In order to reduce the task demands placed on the Expert Reviewers, this step was implemented after determination of the viability of the item rather than at the beginning of the item-elimination process, as is ordinarily done in the construction of a measuring instrument.

The mechanics of obtaining evaluation of item relevance involved providing two expert judges with the working definition of the construct of ontologic joy. Next, the two expert judges were requested to rate each item for relevance to the construct of ontologic joy on a seven-point Likert-type scale across a continuum of high, moderate or low levels. Comments were invited on individual items. This review was useful for a number of reasons (DeVellis, 1991). First, the responses by expert judges served as data to confirm or disconfirm the construct of interest. Items where little agreement existed obviously have at least one property that brings into question the construct validity of ontologic joy. Secondly the content of an item may be germane, however the wording may have been problematic which detracts from the item reliability. Thirdly, expert judges added a perspective of assessing the phenomenon of joy that may have been overlooked.

3.6.9 Step 9. Selection Against Social Desirability

The items surviving the above elimination hurdles were rank-ordered for freedom from social desirability variance within the context of magnitude of item reliability as evidenced by the correlation between the provisional item and the total score of the Avoidance of Joy Scale. This mechanical step simply sets out the rank-ordering of provisional items according to the magnitude of the item-total correlation with its own designated scale after the overlapping variance of social desirability has been subtracted. Jackson (1970, 1984, 1989) has termed this formulation the "Differential Reliability Index", which is calculated: $r_{is}^2 - r_{id}^2$ (where "is" indicates the correlation for the provisional item-total score on avoidance of joy and "id" corresponds to the provisional joy item-social desirability scale correlation). Thus a provisional item of greater content purification with lower social desirability overlap (e.g., $\sqrt{.50^2-.20^2} = .458$) obtained a higher rank than an item with greater initial content saturation but which also possessed greater social desirability variance, (such as $\sqrt{.60^2-.50^2} = .332$). In as much as the overall objective of refined scale measurement is the determination of true score variance, the procedures used to effect this property were employed throughout this investigation. Notwithstanding this objective, the procedures available for enhancement of true score reliability are not necessarily concise nor exact. For example, DeVellis (1991) advises that provisional items with low item-total correlations should be eliminated first from the final form of a scale. Similarly, items with lower squared multiple correlational values (available through SPSS-X: Reliability) should be culled as well. Although related, these two procedures are not identical nor equivalent. DeVellis (1991) offers no criterion as to which procedure should take preference over the other, or how the criteria be applied in combination with each other. The issue is two-fold. Firstly, the index of a squared multiple correlation is sensitive to some influences of bias (Glass & Hopkins, 1984; SPSS Inc., 1991). As such, enhancement of scale communality through item selection based on the regression of an item on the remaining items (DeVellis, 1991) includes systematic (i.e., nonrandom) variance from extraneous relationships (e.g., stylistic response or other variance of one or more latent variables) as part of the reliability of a measure. As noted throughout this investigation, such systematic variance is not necessarily conducive to determining the true score of the latent variable. It is this variance attributable to stylistic responding that the Jackson procedures are designed to decrease.

Communality, however, is an important component of reliability with the proviso that the communality be attributed to the latent variable or construct of interest. Because of the tendency to biasing in multiple correlation (Glass & Hopkins, 1984; SPSS Inc., 1991), it was decided that slightly more weight would be given to the item-total correlation rather than to the squared multiple correlation procedure in selection of final items where replacement of an item(s) seemed indicated. Thus squared multiple correlations of each provisional joy item were determined through regressing each joy item across the 20 items of the Jackson Social Desirability Scale. The variance of this squared multiple correlation was then subtracted from the variance of the squared multiple correlation derived from the regression of each joy item across the other joy items included in the tentative scale. Thus a Differential Communality Index based on the squared multiple correlation was calculated for each provisional replacement item in the same fashion as the

Differential Reliability Index by Jackson (1970) with respect to item-total correlations. Each Index was used to rank-order each provisional replacement item separately. These rank orders were then added to produce a combined rank-ordering of replacement items as illustrated below (where subscript "a" refers to the Differential Reliability Index, and subscript "b" to the Differential Communality Index):

Provisional item	Rank_a	Rank_b	Σ_{ab}	Rank_{ab}
a	2 x .6 = 1.2	1 x .4 = 0.4	1.6	(1)
b	5 x .6 = 3.0	2 x .4 = 0.8	3.8	(4)
c	3 x .6 = 1.8	3 x .4 = 1.2	3.0	(3)
d	4 x .6 = 2.4	5 x .4 = 2.0	4.4	(5)
e	1 x .6 = 0.6	4 x .4 = 1.6	2.2	(2)

Thus the selection of replacement items based on a combined ranking would follow the order: a, e, c, b, d. The replacement items for inclusion in the final Avoidance of Joy Scale were selected according to their combined rank-order as noted above depending on whether an avoidance or an approach item required replacement in either the positively or negatively-worded direction.

3.6.10 Step 10. Optimal Scale Length

In view of the stringent criteria for selecting items, the use of a large number of provisional items is deemed obvious. Moreover, because the construct of the Avoidance of Joy Scale was framed in the format of avoidance and approach tendencies, the necessity for a large number of provisional items was further necessitated due to the requirement that the Avoidance of Joy Scale discriminate from seven other scales also framed in an avoidance-approach format. The reason for this is that the alpha coefficient of the Avoidance of Joy Scale depends on the extent of covariation among the items as well as the number of items in the scale (DeVellis, 1991). Clearly maximizing one of the assets (i.e., discriminant item validity) reduces another feature (i.e., item covariation: DeVellis, 1991; Ruznisky, Thauberger, & Cleland, 1982). Because reliability can be augmented by increasing test length, the trade-off between brevity and reliability is not fatal. Answering the question of the optimal test length of the Avoidance of Joy Scale was determined empirically. The idea of tinkering with scale length (DeVellis, 1991) was facilitated in practice through the SPSS-X Reliability procedure, which provided an indication of the effect of omitting each item in relation to the overall alpha level of the Avoidance of Joy Scale. SPSS-X also provided a squared multiple correlation for each item obtained by regressing the item on all the retained items. Thus an estimate of the item's commonality was provided whereby the effect of loss or gain in alpha could be determined for each item. Following the reasoning of DeVellis (1991), as well as Jackson (1970, 1984, 1989) and others, the augmentation of alpha was considered more important than the length of the Avoidance of Joy Scale, particularly in light of the possibility of a reduction in alpha level in cross-referent samples. As well, examination of the construct of ontologic joy was considered primary in this investigation rather than secondary to the subsequent use of the research instrument. In addition, modifications to the measuring instrument were considered possible depending on the results obtained. For the purpose of this study, the decision to retain or reject an item was based on the criterion of appreciable increase or decrease in alpha levels in arriving at a final version of the scale that seemed optimal with the additional proviso that the increase in alpha level was not due to saturation with social desirability variance.

The requirement that a provisional item pass several hurdles resulted in a final Avoidance of Joy Scale yielding respectable psychometric properties as described in Chapter IV. Through developing the Avoidance of Joy Scale according to the set of sequentional procedures described, considerable confidence in the psychometric properties of the resultant scale was expected. A description of these properties is presented in Chapter IV within the context of the empirical studies undertaken to assess the reliability and validity features of the Avoidance of Joy Scale.

3.6.11 Scoring of the Avoidance of Joy Scale

The Avoidance of Joy Scale consists of 40 items (presented in Table 4.2) extracted from an initial item pool of 528 provisional items. Items were keyed such that a high score indicated avoidance of joy, while a low score indicates the approach of joy. One-half of the items at each pole were worded in the positive direction. Individuals are asked to respond in a True/False For Me format to each item. Each item is given an item score of 1 or 0. Total scores are obtained by summing the scores for all individual items.

3.7 Data Analyses

Standard statistical rules regarding the criterion for judging significance ($p = .05$, two-tailed) were used throughout the study. Decisions regarding the assessment of provisional items of the Avoidance of Joy Scale used in the construction conformed to procedures set out by Carmines and Zeller (1979), DeVellis (1991), and Jackson (1970). Decisions on item selection were made according to statistical rules across the several operational hurdles involved: frequency of endorsement, heterogeneity of content, bipolarity for balanced scaling, scale homogeneity, as well as item selection according to the magnitude of item-total variance remaining after extraction of overlapping extraneous variance. In the second phase of the investigation, the various validity studies conformed to standard research designs using correlational and analysis of variance techniques. Reliability indices were calculated in standard format. The computational facilities of SPSS-X (1988) were used where possible.

The major question to be answered was whether the construct of avoidance-approach of the phenomenon of ontologic joy was scalable in binary format and would yield a scale of respectable reliability and validity properties equivalent to those found in the research literature for scales of similar format and content. A further aspect of this question was whether the constructed scale was distinct from content overlap with other scales in other domains of similar research and, as well, whether the scale constructed was demonstrably free of stylistic bias. A fourth question pertained to the relationship of scores on the Avoidance of Joy Scale and scores of strain, substance use, as well as indices of other social, and health variables. As the major thrust of the research for this investigation concerned the construction of the Avoidance of Joy Scale (i.e., how individuals deal with joy without rewards rather than with rewards), it is important to examine the results achieved. The standard assays for test adequacy involve the basic properties of reliability and validity, which were examined in the context of modern theory of measurement using Standardization Samples I, II, and III as follows:

3.7.1 Evaluation of Reliability

A variety of scale construction procedures were employed throughout the development of the Avoidance of Joy Scale which were anticipated to augment the reliability of the instrument. Firstly the theory of ontologic joy was detailed so as to provide a clear delineation of the construct or latent variable to be measured. Items were generated in four categorical forms (positively-worded avoidance, negatively-worded avoidance, positively-worded approach, negatively-worded approach). An effort was made, as well, to create items that were concise, easy to read, clear, and short in length to facilitate internal consistency particularly in light of Jackson's (1984) demonstration that such kinds of items tend to be less saturated with stylistic response variance. Readability of items was set at approximately the grade seven level as assessed against Fry's (1977) readability levels. As well, a variety of criteria were used to eliminate many of the provisional items which demonstrated weak or extraneous psychometric properties. Only the provisional items with the largest content saturation were selected according to their rank-order derived on the basis of communality and the subtraction of social desirability variance. Lastly the items selected for potential inclusion in the final form of the scale were reviewed for scope of content so as to facilitate as broad a representation of the content domain as possible.

Within the context of the classical measurement model the reliability of the Avoidance of Joy Scale is the proportion of variance attributable to the true score of the latent variable. The various "methods for computing reliability…all share this fundamental definition" (DeVellis, 1991, p. 24). Within this research investigation, the methods of coefficient alpha, split-half (odd-even), theta, and test-retest are employed to help determine the level of reliability in the scale items. It is assumed that reliability varies because of (a) actual variation across research participants in the phenomenon of avoidance-approach of joy (true variation in the latent variable) and (b) error. An explication of the meaning or inference that can be attached to the different methods of computing reliability estimates on the Avoidance of Joy Scale is presented below:

1. Coefficient alpha. Consistent with the classical measurement model, the Avoidance of Joy Scale is considered to be comprised of the phenomenon of ontologic joy "as the source of all shared variation, and 'error' as the remaining, or unshared, variation in scale scores (e.g., a single item's unintended double meaning)" (DeVellis, 1991, p. 26), thus coefficient alpha = 1 - error variance. In other words, coefficient alpha is defined as the proportion of total variation in the Avoidance of Joy Scale attributable to a common source, presumably the true score of the latent variable (i.e., avoidance-approach of joy) underlying the items.

2. Split-half. Another estimate of the proportion of variance in the Avoidance of Joy Scale within the definition of reliability attributable to the latent variable (which is the definition of reliability) is determinable by computing a correlation between two halves of a test under the logic of parallel tests. This implies that both forms of the scale have virtually identical alpha coefficients, means, variances, and also that the items measure the same underlying construct. The estimate of the reliability of the entire scale, based on the reliability of a portion of the scale, can be computed by the Spearman-Brown formula (Crocker & Algina, 1986). In order to avoid the pitfalls associated with the order of items, the odd-even split into two-halves was employed.

3. Theta. Another estimate of the internal consistency or reliability of the Avoidance of Joy Scale was based on the number of items and the value of the first eigenvalue extracted in the principal-components analysis (DeVellis, 1991). Theta = $(n_i/n_i - 1)$ $(1 - 1/\lambda)$, where n_i = the number of items in a measuring instrument, and λ = the value of the eigenvalue obtained for the first factor extracted from a principal-component analysis.

4. Test-retest. A fourth estimate of reliability was determined through the test-retest procedure (N = 24: labelled Standardization Sample III). The logic underlying reliability (or temporal stability) of this type is that if the Avoidance of Joy Scale accurately reflects a meaningful construct, then assessment of the construct should be comparable on separate occasions. Thus, "the true score of the latent variable should exert comparable influence on observed scores on two (or more) occasions, while the error component should not remain constant across

administrations of the scale" (DeVellis, 1991, p. 37). Consequently, the correlation of scores obtained across two occasions should represent the extent to which the latent variable determines the observed measurements, which is considered "equivalent to the definition of reliability as the proportion of variance attributable to the true score of the latent variable" (DeVellis, 1991, p. 38). In interpreting a test-retest score, however, it is important to incorporate the understanding that the estimate of stability includes the construct and its measurement rather than just its measurement alone.

3.7.2 Evaluation of Validity

Messick (1989) has argued that the determination of the "true" internal structure of a test is important for evaluating its construct validity. Defining the reliability of a scale in terms of the true score of the latent variable (or theoretical construct) underscores that the true score is a representation that some phenomenon exerts a causal influence over all the items. In its generic form, the degree of reliability of the measuring instrument as noted earlier, is inversely related to the amount of random error, or 1 - random error. Conversely, random error = 1 - reliability, or the proportion of non-random error (DeVellis, 1991). Nonrandom error, however, is not necessarily attributable solely to the latent variable, i.e., the avoidance of joy. Various variables which are also comprised of nonrandom error may be embedded in the scores of the Avoidance of Joy Scale. Such variables include: other latent variables, response consistencies as social desirability, acquiescence, or satiation; and other method variances such as administrative mode

(Cronbach, Gleser, Nanda, & Rajaratnam, 1972). It is obvious that reliability is a necessary but not sufficient condition for validity. Because of the integral role of reliability in the delineation of a true score of the latent variable (DeVellis, 1991), reliability has been inferred by some authors (such as Ghiselli, Campbell & Zedeck, 1981: Jackson, 1970, 1971) as perhaps the most fundamental issue in psychological measurement. Not only does the level of reliability of a measure impose limits on the degree of validity that can be achieved, but interpretation of a score on a measuring instrument is enhanced by the level of precision in delineating the construct of interest. In other words, understanding of the latent variable is dependent on the precision of delineation about the nature and source of nonrandom error. Consistent with the classical model of measurement, it follows that the more a true score is a reflection of a single construct the less vulnerable the subsequent interpretation is to misinterpretation because of confounding with other variables, method variance, and other artifacts. The adequacy of the Avoidance of Joy Scale as a measure of the construct of avoidance of joy is clearly also an issue of validity.

The validity of a measuring instrument or more technically as Cronbach (1971) articulated: the "interpretation of data arising from a specific procedure" (p. 447) can be inferred from several perspectives. Given that no single validation procedure is a sufficient determination of validity, it is crucial to underscore the distinction between the measuring instrument of the construct and "the measuring instrument in relation to the purpose for which it is being used" (Carmines & Zeller, 1979, p. 17) as noted earlier. Three perspectives regarding validity have emerged in the literature as salient in this regard: (1) the manner in which a scale was constructed; (2) the ability to predict specific events or other effects; and, (3) the relationship of a scale to measures of other constructs (Carmines & Zeller, 1979; DeVellis, 1991; Messick, 1989). These operations correspond essentially to three types of validity: content, criterion-related (concurrent and predictive), and construct. Because these operations are procedures rather than static features of the concept of measurement of abstract phenomena, the resultant features (i.e., the reliability and validity properties) can be affected through the procedures employed. According to Jackson (1970, 1971, 1984, 1989), DeVellis (1991) and others, the psychometric properties of scale reliability and validity can be enhanced by employing advantageous procedures during the construction phase of scale development. This approach to scale development was followed in the construction of the Avoidance of Joy Scale.

Although the classical measurement model (in contradistinction to the contrasted groups method, the rational method and other models) has found increasing acceptability among theoreticians in measurement (Anastasi 1988; Angleitner & Wiggins, 1986; Cronbach, 1990; Messick, 1989; Morey, 1991), it remains necessary to evaluate the results obtained in terms of validity properties. No single analysis can be expected to provide definitive assurance of respectable validity properties of a scale. As such, a series of studies were undertaken with respect to assessing the validity properties of the Avoidance of Joy Scale using Standardization Samples I, II, and IV as follows:

1. Content. There exists no suitable criterion for evaluation of this type of validity. Essentially this is an inferential matter associated with the specific content of the construct of ontologic joy. Herein the literature on joy was reviewed for item content for use in the generation of provisional items. Items had been written with a view to representing the breadth of the content domain. In addition, the items had been shaped for consistency with the theory of ontologic joy and then formatted within the definition of an avoidance-approach tendency. Subsequent to item writing, all items were scrutinized previously by at least two judges familiar with the content domain of joy as well as the theory of ontologic joy. Following identification of potential items for inclusion in the final form of the Avoidance of Joy Scale, all items were reviewed again for breadth of content regarding joy.

2. Criterion-Related. This type of validity is at issue when the purpose is to use an instrument to estimate some form of behavior that is external to the measuring instrument itself. Technically, one can differentiate between two types of criterion-related validity. If the criterion exists in the present, then concurrent assessment can be determined by correlating a measure and the criterion at the same point in time. Predictive validity, on the other hand, concerns a future criterion which is correlated with the relevant measure. The logic and procedures are the same for both concurrent and predictive validity, the difference being the current or future existence of the criterion variable.

(a) Concurrent. If a scale designed to measure both avoidance and approach tendencies to the topic domain of joy in fact measures those tendencies, then such tendencies should correspond to other measures of such tendencies.

i. Behavioral Indices.

A variety of attitudes, beliefs, and behaviors about joy were assessed in terms of frequency of behaviors as well as self-reported tendencies for comparison to scores on the Avoidance of Joy Scale. Given that this procedure is empirical, then statistically significant correlations should result. As well, the magnitude of the correlations should be higher in comparisons involving attitudes and behaviors associated with self-reported tendencies involving the idea of joy without rewards, than for tendencies involving the idea of joy as evoked from rewards. Simple frequencies of statistically significant correlations serves as a criterion of evaluation.

ii. Extreme Groups.

Extreme groups validation involves demonstrating that a scale can differentiate members of one criterion group from another, based on their scale scores (Anastasi, 1988). This essentially corresponds to a type of discriminant validity which can either be criterion-related or construct depending on whether the differentiation is theory related or not, as well as whether the information is in the present (concurrent) or future (predictive). This type of discriminant validity involves the creation of separate criterion group(s) on the basis of scores on a scale. These contrasted criterion groups are expected to demonstrate significant differences on dependent measures germane to the latent variable of interest.

For the purposes of validation of the Avoidance of Joy Scale, two contrasted groups were created comprised of the highest scorers (27%) and lowest scorers (27%) on the Avoidance of Joy Scale, while the remaining 46% served as a medium group for comparison purposes. The more extreme the groups, the sharper the differentiation, however, the use of a medium group presents a more stringent criterion for comparison (in light of the rule that a test should correctly differentiate among individuals in the behavior that the test is designed to measure). For the purposes of this analysis, the criterion groups were selected on the basis of total scores on the Avoidance of Joy Scale, rather than on each individual item. The choice of 27% in the upper and lower extremities was based on the work of Kelley (1939) that optimal discrimination is reached at these demarcations in normal distributions. Because sampling error of item statistics is large in distributions that are not precisely normal, only rough results can be obtained. Thus, exact percentages (Cureton, 1957) in the contrasted groups is not of major concern (Anastasi, 1988). As such, the results obtained were interpreted in accordance with these qualifications. Significant differences were anticipated on the dependent variables identified in number (i) above.

iii. Other Measures.

Stress (now being termed "strain": Eysenck, 1988), substance use, and health-related phenomena have a futuristic relevance to the concerns of persons and communities. The theory of avoidance of joy as outlined in Chapter II, suggests that various strains associated with life-event stresses, as well as other behaviors (such as health states) are expected to be differentially related to an avoidance versus approach strategy pertaining to the attitudes, values, emotional response patterns, motivation, and behaviors with respect to the phenomenon of joy in human experience. More specifically, scores on the Avoidance of Joy Scale were expected to be differentially associated with strain to life events, experiences and perceptions since the theory of ontologic joy considers strain as a source variable of human development rather than an effect indicator. On the other hand, substance use is considered in the theory of ontologic joy as both a source and as an effect indicator. Thus scores on the Avoidance of Joy Scale were also expected to be differentially correlated with substance use. The linkage of substance use to the construct of avoidance of ontologic joy, however, is not thought to be a strong one because recreational, experimental, medicinal, and social reasons other than an avoidance-approach tendency are known to be major influential factors in substance use. Insufficient information exists in the extant data used for this analyses to formulate precise predictions. The analyses, however, were considered worth doing because of the virtual absence in the literature of information about interlinkage of joy and substance use. As such, the particular analyses noted for this specific area of interest were exploratory only.

3. Construct. Because both criterion-related validity and content validity have limited usefulness for assessing the validity of an empirical instrument of theoretical concepts employed in the social sciences (Carmines & Zeller, 1979; Nunnally, 1978), primary attention is focused on "construct validity". Cronbach and Meehl (1955) observe that "Construct validity must be investigated whenever no criterion or universe of content is accepted as entirely adequate to define the quality to be measured" (p. 282). Similarly Messick (1989) has argued in favor of determining the "true" internal structure of a test as important for evaluating its construct validity. In terms of evaluating the structure of the latent variable of interest, "construct validation focuses on the extent to which a measure performs in accordance with theoretical expectations" (Carmines & Zeller, 1979, p. 27). In considering the issue of assessment of the construct validity of the Avoidance of Joy Scale, it is important to identify the expected theoretical structure of the scale. As articulated in the body of the research procedure, the structure of the Avoidance of Joy Scale was expected to be consistent with the classical model of homogeneity. As such, a marked degree of unidimensionality was expected.

A further point in this perspective of measurement concerns the distinction between the homogeneity of a measuring instrument and the structure of the dimension(s) contained within the instrument. Summarily, this distinction involves the potential difference between homogeneity and dimensionality. This distinction is an important one in understanding the structure of the latent variable or construct. Essentially homogeneity or internal consistency among scale items does not necessarily also mean unidimensionality. For example, a scale may be comprised of homogeneous items of two or more latent variables such as depression and anxiety (as noted earlier) rather than a singular construct. Accuracy of interpretation of the construct or latent variable demands knowledge of the internal structure of the Avoidance of Joy Scale regarding these two characteristics.

Loevinger (1957) among others, has argued that in the scale construction process, the specification of the construct should be set out in advance. As described earlier, the expected internal structure of the Avoidance of Joy Scale was that of homogeneity. Within the perspective of simplification of measurement, the requirement also exists that the dimensionality of the latent variable or construct also be set out in advance. The question thus arises as to whether the construct or latent variable would be unidimensional or multidimensional in its structure. Examination of the pertinent issues in this regard helps to answer the question.

Consistent with the overall objective of the classical measurement model, the requirement of simplicity can be adequately met with unidimensional structure. The opposing argument however, is that unidimensional structure may be unduly limiting to the “true” representation of the phenomenon of joy, as well as the subsequent utility of the measuring instrument (DeVellis, 1991). Experience with measurement of abstract constructs in the social sciences in general, and personality variables in particular, indicates that few abstract phenomenon can adequately be reflected in a simple structure that is unidimensional. Typically, a set of twenty dichotomous items using principal components analysis yields three to four "factors" (Jackson, 1984, 1989). Further assays of the characteristics of items suggests that these “factors” can be meaningfully interpreted as “facets” of the construct, which in turn represent unidimensional structure when viewed at a higher-order conceptualization. Thus, for example, Jackson (1984, 1989) has been able to demonstrate discrimination among subscales at a second-order level, while keeping in mind that a particular subscale contains perhaps three or more “factors” of the phenomenon of interest.

Consistent with this perspective, Anastasi (1988) has underscored that although both external validation and internal consistency are desirable objectives of test construction, the relative emphasis placed on each varies with the nature and purpose of a test. In her view, a satisfactory compromise for many testing purposes is to conceive of relatively homogeneous items as “separate tests” or “subtests,” each of which covers a different aspect of the external criterion. Breadth of coverage is thus achieved through a variety of subtests, (each yielding a relatively unambiguous score), in contrast to achieving breadth of coverage through heterogeneity of items within a single test (such as for example, in Cattell-type scales: Cattell, Eber, and Tatsuoka, 1970). In such a procedure according to Anastasi (1988), items with low indices of internal consistency would be segregated and retained, thus preserving relatively high internal consistency within each “subtest” or item group. This approach is premised on the principle that an item that correlates highly with the external criterion, but has a relatively low correlation with the total score, is preferable because a single item (or subtest of items) presumably measures an aspect of the criterion not adequately covered by the rest of the items (Anastasi, 1988).

An alternative way of perceiving the relation between external validity and internal consistency combines the principles of generalizeability theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) and multiple-factor theory of trait organization (e.g., Harman, 1975; Kelley, 1928; Thurstone, 1938; among others). Although the initial work in trait organization focused on human abilities, the fundamental tenets of these theories are extendable to personality traits. In terms of current theory in measurement, generalizability theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) provides a framework for uncovering the extent of equivalency of a measurement process across one or more dimensions (DeVellis, 1991). Each dimension can be considered a potential source of variation that is termed a "facet." Within the assumptions of generalizability theory (Feldt & Brennan, 1989), observations across different facets constitute a universe of admissible observations which are referred to as the universe score which corresponds to the true score of classical measurement theory (Allen & Yen, 1979). The use of generalizability theory is germane to the study of variability of a construct, because it allows a researcher to devise designs that differentiate covariation that reflects similarity of constructs (which is relevant to construct validity) from covariation that is artifact arising from method procedures (which is unrelated to construct validity). In this context, the rationale is extendable from the multitrait-multimethod matrix conceptualization (Campbell & Fiske, 1959), wherein similarity in variation (covariation) is associated with similar measures (in this case, facets of joy) in comparison to similar measures of dissimilar constructs.

Although the multitrait-multimethod procedure within generalizability theory is frequently conceived in simpler form (e.g., a two-facet Generalizability technique with traits and methods being the facets--see DeVellis, 1991; Mitchell, 1979 for examples), Jackson, (1984, 1989) has demonstrated the viability of a more extended approach to the issue of convergent-discriminant validity. In a similar context the conception of group factors, for example as noted by Spearman (1904,1927), can be considered as analogous to facets in generalizability theory. These group factors are not as universal as "g" nor as strictly specific as the "s" factors, which by definition are not expected to correlate with "g". A general factor (g) is conceptually similar to Jackson's (1984, 1989) higher-order factor which defines the construct of a personality scale, while "group factors" correspond to different factors within the content of scale items. By way of analogy, the broad group factors included by Spearman (1927), such as arithmetic, mechanical, and linguistic abilities, can be conceptualized as similar in form to different factor domains within a phenomenon of interest. Possible domains include cognitive, affective, behavioral, motivation imaginational, sensory-motoric, and other potential linkages. Further discussion of the defining properties of the factors contained within the Avoidance of Joy Scale will be discussed later in the course of this research investigation.

Because of the nature of the data being examined in this research investigation, the analyses performed are not equitable to a full multitrait-multimethod type study. Such analyses await future research. Nonetheless, this research investigation commences such study up to the point of specifying the internal structure of the Avoidance of Joy Scale. In this regard, the expectation for the principal-components analysis is that each of these factors will demonstrate similar correlations with various other latent variables for which data exist within the database. If these "facets" of ontologic joy reflect that construct, then similar correlations must arise. Inconsistency in the correlations between these factors and any of the other latent variables brings into question the issue of construct validity of the Avoidance of Joy Scale. This type of analysis, however, is not definitive of either confirmation or disconfirmation due to the possibility that the factors may be simply homogenously similar rather than unidimensional with respect to the latent variable of ontologic joy. Alternatively, evidence of dissimilarity may be a "true" reflection of the properties of each of the facets. Thus it is underscored that this analysis is only one procedure of many required in understanding the internal structure of the Avoidance of Joy Scale.

In order to assist the reader's understanding of the complex matters of validity within this investigation, a more specific delineation of the separate types of validity assessments used in the research operations are detailed below:

(a) Theoretical. The first type of evaluation of the construct validity of the Avoidance of Joy Scale is theoretical. Essentially this form of evaluation is based on the non-frequency of occurrence, i.e., if certain known psychometric contaminants are not evident, then it is more likely that the Avoidance of Joy Scale could be substantially representative of the latent variable of ontologic joy. Several psychometric properties are considered to be mandatory. Disconfirmation findings of any of these properties would bring into question the validity of the construct (see DeVellis, 1991 regarding correlation size as evidence of construct similarity/dissimilarity between two measures).

Consistent with the classical measurement model these properties include (a) evidence of high internal consistency coefficients (Cronbach α, theta, split-half, test-retest); (b) low correlations between scores on the Avoidance of Joy Scale and social desirability (as measured by the Jackson Social Desirability Scale), as well as acquiescence (as measured by Welsh's Repression Scale); (c) Scores on the Avoidance of Joy Scale must be more highly associated with external self-reported behaviors of joy without rewards versus joy with rewards; and (d) Scores on the Avoidance of Joy Scale must not be correlated with other extraneous latent variables. Determination of the above coefficients were based on a cross-reference sample (N = 35: labelled Standardization Sample IV).

(b) Factor Analytic Evidence. Factor analysis can be useful for assessing the construct validity of empirical measures (Carmines & Zeller, 1979; DeVellis, 1991; Nunnally, 1978). The first aspect pertains to the structure that underlies the items of Avoidance of Joy Scale. An assumption underlying the methods of assessing reliability is that the items in the scale are parallel. Armor (1974) has observed that there are two conditions under which real data can violate this assumption: (1) if the items measure a single phenomenon unequally, or (2) if the items measure more than one concept equally or unequally. As Carmines and Zeller (1979) have pointed out, "Factor analysis is explicitly designed to cope with both of these assumptions" (p. 59). Essentially factor analysis consists of a variety of statistical methods for uncovering clusters of interrelated items (Harman, 1976). While the model of homogeneity predicts a reasonable degree of unidimensionality, construct validity in terms of the homogeneity model expects a substantial degree of unidimensionality. (The reason why complete unidimensionality would not be possible concerns the effect of response style variance embedded in the items, random error variance associated with testing: for example, other nuances of testing, such as condition of the participant at the time of testing, slight ambiguity in meaning of words, lack of complete attention on the part of some participants, and so forth; as well as the inability to create precisely parallel items).

Factor analysis thus provides the opportunity to examine the characteristics of the clusters of items that emerge in a principal-components analysis of the items of the Avoidance of Joy Scale. Because two factors emerged for example, it is possible to examine the characteristics of these two sets of items. It is not necessarily the case, however, that one factor corresponds to positively-worded items, while the second factor corresponds to negatively-worded items. At this point in the evaluation process, the results of a second factor analysis would likely be enlightening if more than two major factors had emerged in the factor analysis of the items of the Avoidance of Joy Scale. "Following the logic of construct validation, the appropriate procedure is to compare the correlations of each empirical dimension…[in this case the construct of ontologic joy] with a set of theoretically relevant external variables" (Carmines & Zeller, 1979, p. 67). If positively and negatively-worded joy factors (should this have emerged for example; a similar line of reasoning could be adopted if another or other type of cluster had emerged as well) measure different components of the construct of ontologic joy, then these clusters should relate differentially to at least some of these external variables. On the other hand, if the clusters measure a single dimension of ontologic joy with the bifactorial structure being due to method variance (e.g., acquiescence associated with positively and negatively-worded items), the two clusters (i.e., factors) should relate similarly to these theoretically relevant variables. By following this procedure, it is possible to evaluate the theoretical structure of ontologic joy. A variety of external variables were included in the database for use in this regard. As a criterion for evaluation, the difference between the correlations for the two sets of factors (clusters of ontologic joy items) were compared both in terms of magnitude, and frequency of statistical significance of the correlations.

(c) Criterion-Related Validity as Evidence of Construct Validity. DeVellis (1991) has observed that the same exact correlation can serve the purpose of criterion-related or construct validity. "The difference resides more in the investigator's intent than in the value obtained" (DeVellis, 1991, p. 47). Although described earlier under the heading of "concurrent validity", the research described therein is consonant with the criterion of prediction from the theory of ontologic joy. As such, the expected results outlined therein are also evidence of the construct validation of the Avoidance of Joy Scale. In that individuals who subscribe to the value of approaching joy exemplify a higher-order of development as outlined in the theory of ontologic joy, it is expected that differential relationships will exist for scores reflecting avoidance versus approach to various joy activities. More specifically, avoidance scores (high scores on the Avoidance of Joy Scale) were expected to be associated with reflecting joy with rewards, while approach scores (low scores on the Avoidance of Joy Scale) were expected to be associated with activities that are not reward producing. In summary, although a variety of tests of validation are engaged in this research project, the assessment of validity of the Avoidance of Joy Scale is a lengthy and arduous process. Within the scope of this dissertation research project though, the tests of validation represent a satisfactory coverage so as to provide sufficient evidence as to the viability of future research using the Avoidance of Joy Scale.

CHAPTER IV

RESULTS

4.1 Introduction

The main objective of this investigation was the development of a bipolar scale to measure the avoidance and approach tendencies to the phenomenon of joy. Subsequent validation studies were predicated on the successful construction of an Avoidance of Joy Scale which possessed satisfactory psychometric properties. To facilitate exposition, the results of the investigation are presented in two parts. Part I presents the findings with respect to the derivation of the Avoidance of Joy Scale. Included in Part I are the results pertaining to the selection of scale items outlined in Chapter III, as well as the summary results from cross-referent samples regarding control for both the stylistic response bias and extraneous content variances. The results pertaining to the psychometric properties of reliability and the internal structure of the Avoidance of Joy Scale are presented in Part I as well. These particular results correspond to Hypotheses I and II of the investigation.

Part II presents the results of analyses associated with the "external" components of the validation process. Specifically, these results correspond to Hypotheses III and IV of the investigation, which focus on the validity studies regarding criterion-related (concurrent and predictive) and construct validity. Included in Part II, as well, are the results pertaining to the exploratory research with respect to strain, substance use, and several social, as well as health-related variables.

Within this investigation, the analyses concerning the assessment and selection of items for the Avoidance of Joy Scale, as well as both the reliability and validity assays undertaken, were conducted according to routine types of evaluation of these properties (Anastasi, 1988; Carmines & Zeller, 1979; Cronbach, 1990; DeVellis, 1991; Nunnally, 1978). Standard statistical rules for parametric samples regarding significance (p = .05, two-tailed) were used throughout the study. Deviations from any routine procedure are accordingly justified. A variety of psychometric properties of the Avoidance of Joy Scale are detailed in each of the two parts of this chapter.

The results presented herein are based on extant research protocols obtained from research participants located in Saskatchewan and Alberta. All participants were $\geq$ 16 years of age, and responded to questionnaire materials anonymously as well as voluntarily. Contacts were arranged via announcements made through several agencies and organizations, some of which assisted in relaying questionnaire materials. Though the adhoc nature of the data collection procedure provided some randomization, the sample should not be inferred to be fully random. As well, because the Standardization I and II Samples were split from the same pool, interpretation of results should be made with this characteristic in mind. Both the Standardization III and IV Samples are fully independent; however, because of the relatively low number of subjects in each sample, results corresponding to these two samples should be interpreted with appropriate caution.

PART I. DERIVATION OF THE AVOIDANCE OF JOY SCALE

4.2 Findings Pertaining to Hypothesis 1

The intent of Hypothesis 1 pertained to the primary objective of this investigation which was to construct a scale on avoidance of joy. Thus Hypothesis I was stated in experimental rather than statistical terms: **It is feasible, using the methodology and technical skill described in Chapter III of this investigation, to construct a scale on the avoidance of joy which corresponds to the classical structural model of homogeneity.** Hypothesis 1 was confirmed with the demonstration that the construct of ontologic joy was statistically reflected in a scale with psychometric properties of respectable magnitude. Both the 40 item version and 20 item version of the Avoidance of Joy Scale were demonstrated to be at least equivalent to other respected scales appearing in the current research literature. The salient results corresponding to the construction of the Avoidance of Joy Scale are detailed below.

4.2.1 Item Evaluation and Selection

As Steps 1 through 6 of the sequential procedures for scale construction outlined in Chapter III are essentially descriptive only, the results of the analyses of actual data commence at Step 7, Item Evaluation. Several criteria were used to assess each provisional item for the Avoidance of Joy Scale as follows:

The first evaluation involved examination of the endorsement frequencies for each of the provisional scale items, and those with proportion values $\leq .05$ or $\geq .95$

were excluded from further analyses. Jackson (1970, 1984, 1989) has observed that items with extremely high or low endorsement frequencies tend to have unstable correlations, have a low discrimination property, and are susceptible to response biases that reduce reliability as well as the convergent-discriminant validity of an item. In total 59 of the 528 provisional items were excluded on this basis. Of the 59 items so excluded, 57 had high endorsement frequencies which indicates that the phenomenon of joy is viewed with considerable consistency across the sample of participants.

The next phase of item evaluation involved examination of the magnitude of correlation among the provisional items. Within the classical measurement model, the higher the intercorrelations among items, the more reliable the individual items are considered to be (DeVellis, 1991). Because the correlation between any two items equals the r^2 between either item and the true score, r^2 is also the reliability of each of the items (DeVellis, 1991). Thus the property of intercorrelation can be examined by computing item-total scale correlations. A mean near the centre of the theoretical range of the scale, good variability, positive correlations among items, strong inter-item correlation, and high item-total scale correlations are contributors to a high alpha value, which is an indication of the proportion of variance in the scale scores attributable to the true score (DeVellis, 1991).

In order for an item to discriminate from other extraneous scales, it follows that the true score with the avoidance of joy variable should exceed the correlation between that item and other extraneous variables. To assist this aspect of item evaluation, biserial correlations were calculated for each joy item and the total scores for scales measuring the avoidance of death, loneliness, rejection of self, rejection of others, rejection by others, meaninglessness, guilt of omission, and guilt of commission. Because the property of an item should also discriminate between stylistic response biases and the content dimension of the latent variable, biserial correlations were also calculated between each provisional item of the Avoidance of Joy Scale and total scores for scales measuring social desirability, infrequency responding, satiation and acquiescence. Provisional items were eliminated from further analyses if the biserial correlation with its own scale (i.e., the Avoidance of Joy Scale) did not exceed the biserial correlation with any other content scale listed above. Of the 469 provisional items evaluated, 276 were eliminated from further analysis by this criterion.

4.2.2 Expert Review

As noted in Chapter III, the rationale for inserting the step of "Expert Review" after the elimination of numerous provisional items (335 in total) on the basis of statistical criteria (endorsement frequency, as well as freedom from overlap with variances attributable to stylistic response biases, and other extraneous content) was based on the desire to reduce the task demands of the expert judges. As all data regarding the provisional items were extant, rewording of items was impossible, which ordinarily is one of the major contributions this step provides. In light of the use of extant data, the psychometric properties of provisional items (such as endorsement frequency, and overlap with the other measures used in the item evaluation) are also fixed at the outset.

Underscored in evaluating provisional items for relevance was the distinction between redundancy of content and redundancy of sentence construction. Whereas redundancy of content is an integral part of internal consistency (DeVellis, 1991), redundancy in wording, vocabulary or sentence structure of items can be expected to decrease the component of method variance among individual items. For the purposes of the construction of the Avoidance of Joy Scale, three operations of evaluation were employed. First, those items which demonstrated agreement between the two judges regarding high or moderated relevance were retained for further analysis. Second, those items where differences appeared were discussed to achieve consensus. If consensus could not be reached, the item was eliminated. Lastly items where agreement existed as to low relevance of the item (viz-a-viz the construct) were excluded. Of the 193 items examined by the expert judges, a total of 178 were retained (171 on the basis of agreement and 7 via the consensus criterion).

4.2.3 Homogeneity

As described in Chapter III, a procedural step in the construction of the Avoidance of Joy Scale was the selection of items for inclusion in the final form of the scale according to several guiding principles expected to reduce both random and nonrandom error, and to do so without unduly sacrificing scale homogeneity. As noted earlier, using the three criteria outlined in Subsections 4.2.1 and 4.2.2, the initial pool of 528 provisional items was reduced to 178 items. The items surviving all hurdles to this point were distributed as follows: negatively-worded avoidance

(n_i = 69); positively-worded avoidance (n_i= 59); negatively-worded approach (n_i = 39); and positively-worded approach (n_i = 24). Clearly the hurdles employed in the item elimination procedure favored items worded at the avoidance end of the avoidance-approach of joy continuum. A further review of the item response frequencies in the item elimination process clearly reveals that the approach items retained considerably higher endorsement frequencies. Because the size of the item-total correlation coefficient is constrained, in part, by endorsement frequencies (i.e., for binary formatted items or biserial correlations), the lower coefficients obtained for approach items was consistent with previous findings by other researchers. For example, a similar disproportionate distribution of items across category wording has been observed in earlier work involving shaping of items in avoidance-approach directions (Ruznisky, Thauberger, & Cleland, 1982; Thauberger, Ruznisky, & Cleland, 1981).

Following the reduction of the pool of provisional items to n_i = 178 as described in Chapter III, recalculations of correlations were obtained on the reduced pool of provisional items, and the item elimination procedures were reapplied. This reduced the pool of provisional items to 159 for which recalculated correlations were again obtained. Selection of the best 40 provisional items for potential inclusion in the final form of the Avoidance of Joy Scale was according to the item's rank-order on the combination of both the Differential Reliability Index and the Differential Communality Index within each of the four categories of items (see Chapter III for a more detailed description of the procedure employed). As well, the best 20 items (five items from each of the four categories of items) were identified from the 40 item version of the scale according to the value on the Differential Reliability Index. A 20 item scale was considered useful for reasons of brevity in scale length.

Alpha coefficients were then calculated (using inter-item covariances) for both the shorter and longer versions using the Reliability Procedure of SPSS-X. The yield appeared highly satisfactory for scales comprised of binary formatted items (α = .91, 40 items; α = .86, 20 items). These coefficients equal those obtained for other refined scales found in the literature.

4.2.4 Scale Refinement

Following the rationale for refinement in measurement by "tinkering" with scale items before making the final selection (DeVellis, 1991), a Principal-Components Analysis was performed separately on the data pertaining to each of the 40 and 20 item versions of the Avoidance of Joy Scale. Not only does such "tinkering" assist the process of refinement of the measuring instrument, but also assists the identification of the structure of the scale(s) under construction (Carmines & Zeller, 1979; DeVellis, 1990).

Knowledge of the internal structure of a scale is also important to understanding its construct validity (Messick, 1989). Both principal-components (using 1.00 in the matrix diagonal) and principal-factor (ordinarily using the squared-multiple correlation in the diagonal of the correlation matrix) solutions are considered to yield comparable results. A principal-components solution was deemed preferable because of its "use of latent roots of components in order to apply the scree test" (Cattell, 1978, p. 63), which is useful for determining the appropriate number of factors for extraction. Further, the principal-components solution "accounts for the variance of all variables in terms of common factors alone" (Cattell, 1978, p. 64), whereas principal-factor solutions require the aid of specific factors to account for the total variance, thus giving commonalities (h^2) of less than one. The use of specific factors adds some indeterminacies to the investigation, "since one cannot produce ($n + k$) values from given n values in the exact way one can produce n components from n variables" (Cattell, 1978, p. 64). In addition, the principal-component solution includes the full error variance in the initial solution. This inclusion, in advance, eliminates the necessity of later speculation about the influence of error when the factor solution is derived through a principal-factor or other similar factor procedure. On the minus side, the use of 1.00 in the matrix diagonal introduces more variance into the factor-solution than actually exists in the data, and tends to force specific factors into common ones (Cattell, 1978). The issue of error variance, nonetheless, is relevant to the accuracy of factor interpretation. Thus it was deemed appropriate to engage the issue of "error" variance at the onset.

In the initial Principal-Components Analysis, the first factor (of 13 with eigenvalues above 1.00) accounted for 21.4 percent of the total variance. Because of the sizeable number of eigenvalues (the sum of squared factor loadings) above 1.00, the Scree test (Cattell, 1978; Cattell & Vogelman, 1977) was performed utilizing the Scree Plot option available through SPSS-X. The Scree Plot, however, was not especially precise with respect to a clearly discernable elbow in the plot of factors. In order to assist the determination of the appropriate number of factors to extract, the Minimum Average Partial Test (Velicer, 1976) was applied also. Herein, one component was determined as being appropriate for the 20 item version of the Avoidance of Joy Scale, while two components were determined as appropriate for the 40 item version. In addition, rotation to Varimax solution in separate forced two, three, four and five-factor solutions indicated the two-factor solution as most suitable to interpretation. More specifically, in the two-factor solution all items separated under Varimax rotation into an "avoidance" grouping (Factor I, with the exception of one item) and an "approach" grouping (Factor II, with the exception of two items). This separation according to the item shapes of "avoidance" (Factor I) and "approach" (Factor II) was consistent with the theoretical perspective of ontologic joy, and thus further construction of the Avoidance of Joy Scale along this line of reasoning was considered both appropriate and warranted.

A similar result occurred for the Principal-Component Analysis performed on the 20 item version of the Avoidance of Joy Scale. A two-factor solution was deemed appropriate following examination of the rotated loadings (Varimax) in separate two, three, four and five forced-factor solutions. Only one item (approach variety) was found to have the primary loading on Factor I (the avoidance item grouping). As well, examination of the Scree Plot was somewhat clearer for the 20 item version of the Avoidance of Joy Scale versus the 40 item version discussed above. Herein the Scree Plot (Cattell & Vogelman, 1977) provided a somewhat clearer indication of the location of the elbow in a two-factor solution. Although the Minimum Average Partial Test (Velicer, 1976) indicated only one appropriate component, the clear separation of avoidance and approach items in the two-factor Varimax rotation, along with the corresponding results of a two-factor solution indicated in the Scree Plot, suggested a two-factor solution as being most appropriate (Zwick & Velicer, 1986).

In light of the requirement noted earlier in Chapter III regarding balance in category of items (i.e., for control of acquiescence response variance), all three of the exceptions in items (pertaining to primary factor loadings) were replaced from the provisional item pool. All replaced items were selected from those which survived the hurdles noted in Chapter III regarding stylistic responding and extraneous variance criteria. Replacement items were selected according to their rank-order on the combination of the Differential Reliability Index and the Differential Communality Index described in Chapter III.

Next, the items of both the 20 and 40 item versions were examined in detail with respect to scope of content. Five items appeared redundant and were replaced. These five items (four avoidance and one approach) were replaced with items from the provisional pool according to their rank order on the combination index noted above. Again all replaced items were selected from only those that surpassed earlier hurdles. As noted above, all replaced items throughout this series of steps were selected according to their rank order on combination index described in Chapter III.

Subsequent to the above, both the 20 and 40 item versions (now including replacement items) were reanalyzed according to a Principal-Component Analysis followed by a two-factor Varimax solution. All items were reexamined for separation on either the First or Second Factor. One approach item was found to still load inappropriately on the "avoidance" item factor within the 20 item analysis. Although this item, loaded appropriately in the 40 item analysis it was replaced for reasons of increased precision in measurement. A further Principal-Components Analysis was performed on both the 20 and 40 item versions of the Avoidance of Joy Scale. Examination of the two-factor solution (Varimax) revealed all avoidance items had primary loadings on Factor I (Varimax), while all approach items had primary loadings on Factor II (Varimax). The summary data pertaining to the final factor analytic loadings are provided in Table 4.1 together with the corresponding final Scree Plots (Figure 4.1, 40 item version; and Figure 4.2, 20 item version). The results presented in Table 4.1, as well as both Figures 4.1 and 4.2 have little dissimilarity to the results obtained from the initial Principal-Component Analysis. A very slight reduction in the amount of variance extracted occurred, while the number of factors extracted with eigenvalues above 1.00 remained the same. More specifically, for the final form of the 40 item version of the Avoidance of Joy Scale, the Principal-Components Analysis yielded two factors with eigenvalues above 2.00. These first two factors contained 26.4 percent of the total communality (eigenvalues 7.88 with 19.7 percent of the variance, and 2.69 with 6.7 percent of the variance respectively). Thus a loss of less than two-percent of the total variance arose due to the replacement of several items for reasons of primary loading on the appropriate factor, as well as generalizability of scale content.

Because one of the guiding principles in the construction of the Avoidance of Joy Scale was the maximization of homogeneity, it was deemed appropriate to examine the internal consistency coefficients of the resultant scales after “tinkering,“ (Chapter III this dissertation; DeVellis, 1991). Using the Reliability Procedure of

Table 4.1

Summary Factor Loadings for the Principal Components Analysis of the Avoidance of Joy Scale^{ab}

			40 items					20 items				
			Unrotated		Rotated			Unrotated		Rotated		
		Source	Factor I	Factor II	Factor I	Factor II	h^2	Factor I	Factor II	Factor I	Factor II	h^2
1	(5)	Approach +	31	41	01	52	27	30	17	13	31	12
2	(1)	Approach +	23	24	04	33	11	21	19	05	28	08
3	(25)	Approach +	19	40	-09	44	20	--	--	--	--	--
4	(9)	Approach +	35	14	21	32	14	37	32	10	48	24
5	(29)	Approach +	34	22	14	37	16	--	--	--	--	--
6	(13)	Approach +	50	36	20	58	38	50	41	15	63	42
7	(21)	Approach +	43	24	21	45	34	--	--	--	--	--
8	(17)	Approach +	43	35	15	54	31	48	33	18	55	33
9	(33)	Approach +	34	45	01	56	32	--	--	--	--	--
10	(37)	Approach +	33	29	10	43	20	--	--	--	--	--
11	(3)	Approach –	26	14	13	27	09	25	19	08	30	10
12	(7)	Approach –	27	27	06	38	15	28	20	10	33	12
13	(23)	Approach –	22	09	13	21	06	--	--	--	--	--

		Source	Factor I	Factor II	Factor I	Factor II	h²	Factor I	Factor II	Factor I	Factor II	h²
14	(27)	Approach –	28	54	-09	61	38	--	--	--	--	--
15	(11)	Approach –	55	20	33	48	34	59	46	18	73	56
16	(31)	Approach –	27	08	17	22	08	--	--	--	--	--
17	(15)	Approach –	49	25	25	49	31	53	51	11	73	54
18	(35)	Approach –	30	30	07	42	18	--	--	--	--	--
19	(19)	Approach –	36	19	18	37	17	37	34	09	49	25
20	(39)	Approach –	27	15	13	28	10	--	--	--	--	--
21	(2)	Avoidance –	58	-17	57	20	37	62	-25	64	17	44
22	(30)	Avoidance –	53	07	39	36	28	--	--	--	--	--
23	(6)	Avoidance –	55	-16	54	19	33	57	-45	73	-02	53
24	(10)	Avoidance –	54	-25	59	12	36	53	-17	53	19	31
25	(22)	Avoidance –	45	-01	38	25	20	--	--	--	--	--
26	(14)	Avoidance –	51	-09	47	23	27	55	-30	62	10	40
27	(26)	Avoidance –	50	-26	56	08	32	--	--	--	--	--
28	(18)	Avoidance –	51	-32	60	04	36	51	-26	56	10	33
29	(34)	Avoidance –	40	-35	53	-04	28	--	--	--	--	--
30	(38)	Avoidance –	50	-18	51	15	28	--	--	--	--	--
31	(4)	Avoidance +	67	-17	64	26	48	68	-19	66	26	50
32	(8)	Avoidance +	51	-23	55	12	31	51	-13	48	20	27

		Source	Factor I	Factor II	Factor I	Factor II	h^2	Factor I	Factor II	Factor I	Factor II	h^2
33	(12)	Avoidance +	59	-08	52	28	35	63	-14	58	27	42
34	(24)	Avoidance +	39	-19	43	08	19	--	--	--	--	--
35	(16)	Avoidance +	61	-22	62	18	41	61	-20	61	21	42
36	(20)	Avoidance +	51	-10	47	22	27	52	-26	57	10	34
37	(28)	Avoidance +	51	07	37	36	27	--	--	--	--	--
38	(32)	Avoidance +	50	-30	58	05	34	--	--	--	--	--
39	(36)	Avoidance +	52	-16	51	18	29	--	--	--	--	--
40	(40)	Avoidance +	43	-49	64	-14	43	--	--	--	--	--
Eigenvalue			7.88	2.69				4.96	1.75			
Percentage of total variance			19.7	6.7				24.9	8.7			

---

[a] Factor loadings are presented according to category. The sequential order of items corresponding to Table 4.2 appears in parentheses. The decimals have been omitted from the factor loadings.

[b] Factor loadings for the 20 item version of the Avoidance of Joy Scale are presented in the row corresponding to the serial position of the item in the 40 item scale.

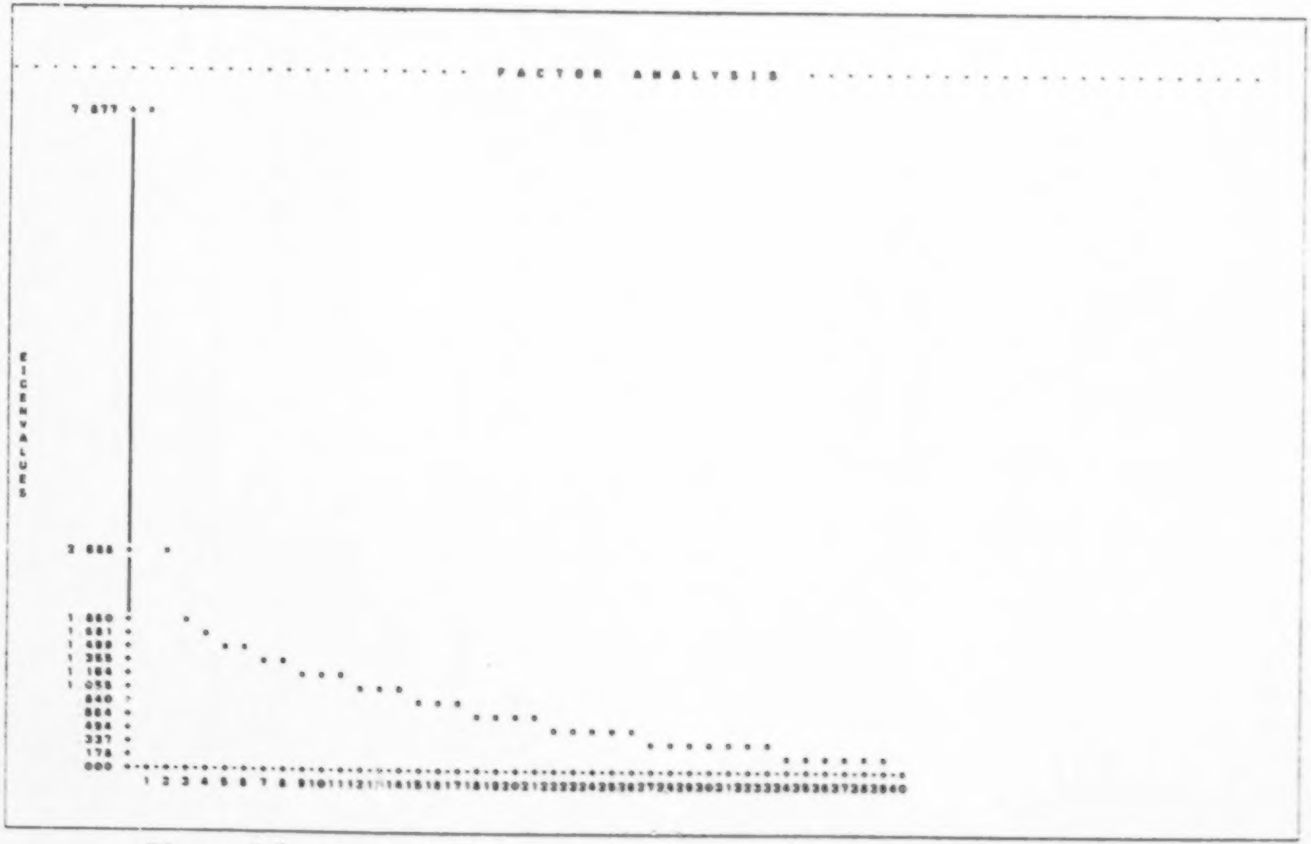

Figure 4.1 Scree Plot for the Avoidance of Joy Scale (40 items)

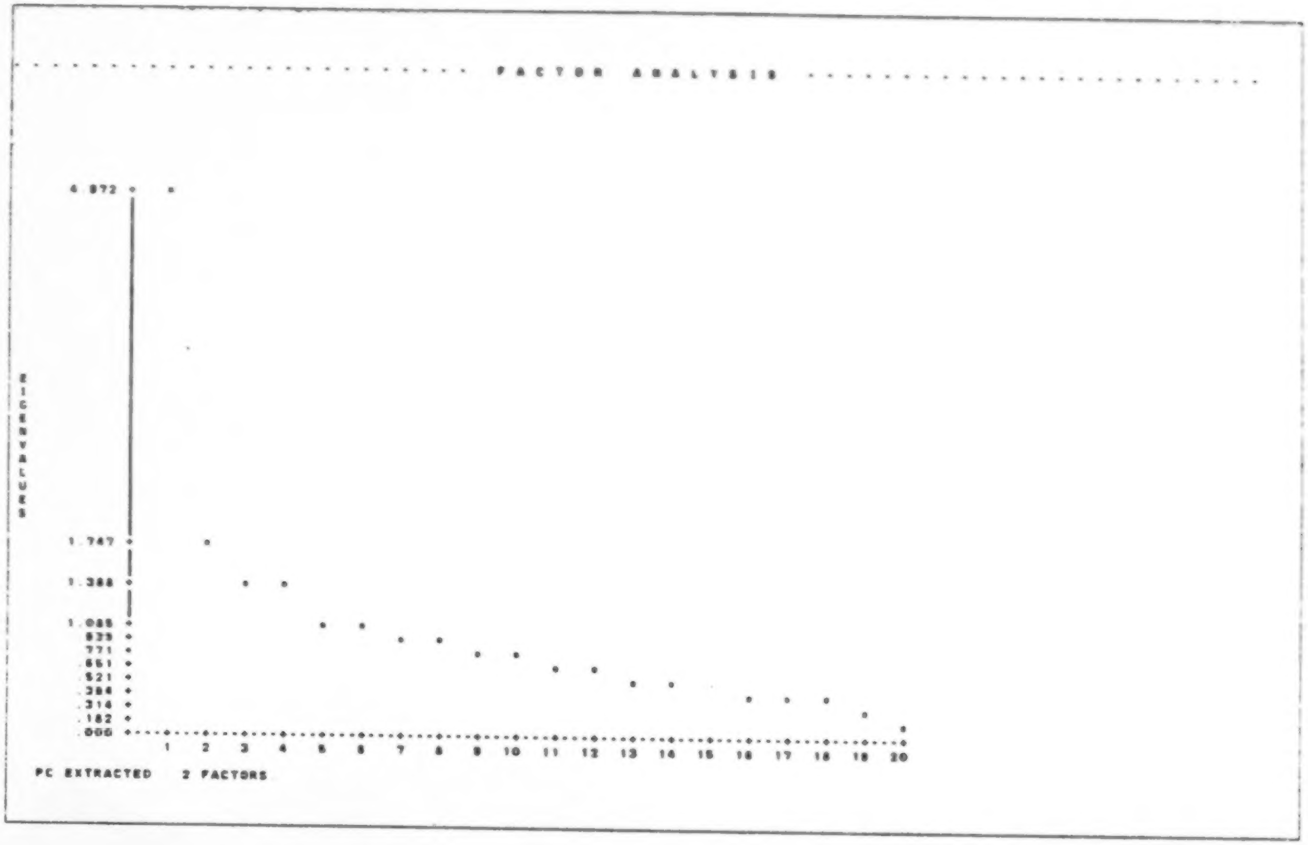

Figure 4.2 Scree Plot for the Avoidance of Joy Scale (20 items).

SPSS-X, both the 20 and 40 item versions were reanalyzed with respect to alpha coefficients. The "tinkering" process resulted in only a marginal reduction (from .91 in the original set of 40 items to .89 in the final set of 40 items). A similar reduction in the alpha coefficient occurred with respect to the 20 item version (from .86 in the original set of 20 items to .83 in the final set of 20 items). This slight reduction in alpha coefficient was anticipated because of the slightly weaker homogeneity of the replacement items due to the procedure of selecting items according to their rank-order on the index employed. The slight sacrifice in internal consistency (as evaluated by the reduction in alpha coefficients) was offset by the gain in precision in the factor structure of the two forms of the resultant scales. Considering that no significant gain in psychometric properties would appreciably result, "tinkering" was stopped at this point in the scale construction process. The resultant 20 and 40 item versions of the Avoidance of Joy Scale are presented in Table 4.2. Summary findings with respect to the characteristics of reliability of the two versions of the Avoidance of Joy Scale are given in Table 4.3.

Evaluation of the reliability of the Avoidance of Joy Scale can be conceptualized in terms of two properties: 1) the homogeneity of the scores obtained from the measuring instrument, as well as the stability of scores over time. Both properties are conceived to reflect different aspects of 'true variation' as distinct from both random and nonrandom error (Carmines & Zeller, 1979; DeVellis, 1991; Feldt & Brennan, 1989). However, no fixed criterion exists which sets the standard or benchmark to judge whether a measuring instrument meets the criterion or does not. Though evaluation is somewhat relative, reliability coefficients can readily be

Table 4.2

Avoidance of Joy Scale Items[a]

Directions: Please respond to each item on the basis of whether it is true or false for you:

1. I can feel comfortable with my own and others' ecstasy. T F
2. It is always best to keep one's happiness a secret if you know that there is someone present who wouldn't approve. T F
3. There is no strategy which will ensure merriment. T F
4. It is always best to count to ten rather than to express one's elation. T F
5. I often feel happy spontaneously. T F
6. I am disappointed in people if they can't control their exuberance. T F
7. I am unable to prevent joy from becoming pure bliss at times. T F
8. I try to deaden my frisky feelings whenever possible. T F
9. Even though I may act ludicrous in a particular situation, I may enter that situation anyway. T F
10. I would not show any blissful feelings around my parents even though I felt these feelings. T F
11. I would not hesitate to express my delight to a lady. T F
12. It is better to be rational, cool, and collected than to be ecstatic. T F
13. I will often risk exposing my internal joy to others. T F
14. If someone talks to me about ecstasy, I do not usually participate. T F

15. I would not hesitate to express my delight to a gentleman. T F

16. People who get ecstatic need to be calmed down. T F

17. I am capable of intense joy. T F

18. Young children should realize that they do not have the right to banter with adults. T F

19. Feasting is not something one should avoid. T F

20. By keeping myself calm, I am able to stay clear of ecstatic outbursts. T F

21. I usually try to surrender myself to my ecstasy. T F

22. I keep myself rational so I will not "float in the clouds". T F

23. I do not try to inhibit the clowning in others. T F

24. "Monkey business" is evil. T F

25. Whenever I am experiencing ecstasy, I just let the feeling be. T F

26. It is disrespectful to jazz it up around old people. T F

27. I do not keep my happiness secret. T F

28. I stay away from places of merriment. T F

29. I am submitted to my ecstasy. T F

30. One should not rejoice too much. T F

31. I do not consider it childish to clown around. T F

32. When one is delighted, it is best to be moderate about it. T F

33. I frequently feel delighted. T F

34. A good mother would never frolic with her children. T F

35. I do not purposely try to forget my recreation. T F

36. I often question whether people even have a right to whoop it up. T F

37. Others often make me laugh. T F

38. Joy does not often spontaneously appear. T F

39. To me, reading a good book is not the best enjoyment one can have. T F

40. It would be a disgrace to whoop it up with a devout member of the clergy. T F

---

[a] Items #1 through #20 comprise the 20 item version. Items #21 through #40 are appended to make the 40 item version. Approach and avoidance items are presented alternately as well as categorically in blocks of four items. The sequence of items presented in Table 4.2 does not correspond to the sequence of presentation provided in Table 4.1.

Table 4.3

Means, Standard Deviations and Reliability Coefficients for Both the 40 Item and 20 Item Versions of the Avoidance of Joy Scale

Source	Sample$_{a,b,c}$	Type	Mean	Standard Deviation	Reliability Coefficient
Avoidance of Joy	Standardization I	Cronbach ∝	7.79	6.63	.89
(40 items)	Standardization I	Theta	--	--	.90
	Standardization I$_f$	Cronbach ∝	7.02	6.04	.89
	Standardization I$_m$	Cronbach ∝	8.61	6.55	.88
	Standardization I	Split-half (odd-even)	7.82	6.33	.89
	Standardization I$_f$	Split-half (odd-even)	7.02	6.04	.87
	Standardization I$_m$	Split-half (odd-even)	8.61	6.55	.91
	Standardization II	Cronbach ∝	7.43	5.33	.83
	Standardization II	Split-half (odd-even)	7.43	5.33	.85

Source	Sample$_{a,b,c}$	Type	Mean	Standard Deviation	Reliability Coefficient
	Standardization III	Test-retest	7.33 test	5.17 test	
			6.67 retest	3.71 retest	.65
	Standardization IV	Cronbach ∝	8.50	8.38	.95
	Standardization IV	Split-half (odd-even)	8.50	8.38	.94
Avoidance of Joy (20 items)	Standardization I	Cronbach ∝	3.72	3.60	.83
	Standardization I	Theta	--	--	.84
	Standardization I$_f$	Cronbach ∝	3.33	3.38	.82
	Standardization I$_m$	Cronbach ∝	4.15	3.79	.83
	Standardization I	Split-half (odd-even)	3.74	3.61	.85
	Standardization I$_f$	Split-half (odd-even)	3.33	3.38	.85
	Standardization I$_m$	Split-half (odd-even)	4.14	3.79	.85
	Standardization II	Cronbach ∝	3.50	3.04	.74

Source	$\text{Sample}_{a,b,c}$	Type	Mean	Standard Deviation	Reliability Coefficient
	Standardization II	Split-half (odd-even)	3.50	3.04	.74
	Standardization III	Test-retest	3.26 test	2.97 test	
			2.81 retest	2.06 retest	.66
	Standardization IV	Cronbach ∝	3.87	4.38	.90
		Split-half (odd-even)	3.87	4.38	.82

[a] Theta is an estimate of the reliability (internal consistency) based on the number of items and value of the first Eigenvalue extracted: Theta = $(n_j/n_i - 1)(1 - 1/\lambda)$. The Eigenvalues for the final form of the 40 item and 20 item versions of the Avoidance of Joy Scale were 7.87721 and 4.97167 respectively.

[b] Subscripts: f = females, m = males.

[c] A slight reduction in the reliability coefficients occurs in the Standardization II Sample. This is partly because of the restriction in variability due to restriction to a female only sample as well as changes in endorsement frequencies. Note: An analysis of the item variances in the Standardization II Sample revealed that five items in the 40 item version of the Avoidance of Joy Scale, and two items in the 20 item had zero variances.

compared in terms of a general understanding as to what value the property of reliability has in terms of a measuring instrument.

As articulated earlier in Chapter III, maximization of 'true variance' remains a superordinate principle within the classical model of measurement. In terms of the size of the reliability coefficients reported for other psychometric scales in the research literature, reliability values above r = .80 appear satisfactory. The results shown in Table 4.3 indicate that the reliability indices for the Avoidance of Joy Scale clearly meet this criterion. Thus the inference that the Avoidance of Joy Scale potentially taps a high degree of 'true variation" is plausible.

A second line of reasoning in evaluating the reliability indices obtained for the Avoidance of Joy Scale involves examination of the concept of reliability within the lore of literature in the measurement of personality traits, which frequently has deemed such measurement to be unreliable. Because the difficulties in measuring an abstract concept have been insurmountable in the past, the train of thought had been one of adopting a lower standard for reliability than seems satisfactory. For example, Tucker (1946) held that scales with reliability coefficients beyond the range of .30 to .80 likely reduced scale validity. Similarly, Guilford (1965) suggested that the reliability coefficients of a scale need not be beyond .60 for most purposes. Cattell (1965) articulated a similar standard. Modern "textbook theory" (e.g., Anastasi, 1988; Cronbach, 1990; Nunnally, 1978) has in more recent times come to the conclusion that a higher standard can be adopted as a result of the advancement in methodology. The reliability coefficients yielded for the Avoidance of Joy Scale considerably exceed the earlier standard for reliability. These data support the contention put forth by Jackson (1967) some 25 years ago, that suppression of such stylistic response variances as social desirability and acquiescence need not obstruct refined measurement. More recently, similar stances have been taken by other authors (e.g., DeVellis, 1991; Feldt & Brennan, 1989; Messick, 1989).

In summary, the results obtained in this investigation demonstrate that the concept of ontologic joy could be scaled satisfactorily in binary format while retaining respectable coefficients of internal consistency or homogeneity. As noted earlier, Cronbach α, theta, and split-half reliability coefficients (odd-even) were acceptably high and were equal to (and generally exceeded) the level of coefficients obtained for other modern personality scales. As well, the standard deviation of the scores on the Avoidance of Joy Scale indicated clear separation of individuals. Further, the reliability calculated as stability (the test-retest correlation coefficient) was high. Test-retest scores are a reflection of both the measurement instrument and the actual personality trait. In light of the shifting nature of the emotion of joy (people do not usually experience continuous joy), the reduction in sample size (Standardization III), as well as the complexity of the test-retest procedure (calculated from double provisional item presentations), the size of the test-retest correlation coefficient also provided strong support for scale reliability.

High indices of reliability alone are not sufficient to infer that a measuring instrument captures the kind of 'true variation' desired. Within the theory of classical measurement, such 'true variation' must not only reflect consistency, but that consistency must be clearly definable within the understanding of the construct or latent variable of interest. In other words, if a measuring instrument is designed to assess a singular construct, then it follows that the instrument be evaluated against criterion involving a singular construct rather than shift to another criterion in order to rationalize the value of the measuring instrument. Some value can be found for any measuring instrument (if one thinks long enough about it), however, such maneuvers should not be classified at the same level of evaluation as those investigations that set out a challenge(s) in advance of the results obtained. Two challenge criteria specified for the Avoidance of Joy Scale were that the instrument display definable structure, and that structure must be distinctively unidimensional. The results pertaining to these two criteria are described in the results immediately following.

4.2.5 Test of the Hypothesized Structure

In attempting to meet the challenge of definable structure for a measuring instrument, a variety of techniques have evolved in the research literature to assist the testing of the structural configuration of a measuring instrument. Such tests are consistent with the objective of designing the measuring instrument to capture "true variation". Issues of both reliability and validity are germane. From the perspective of the theory of measurement, the use of such techniques is generally described in terms of confirmatory research. Evidence of confirmational study is thus appropo to the issue of construct validity of the Avoidance of Joy Scale (Anastasi, 1988; Carmines & Zeller, 1979; Cronbach, 1990; DeVellis, 1991; Feldt & Brennan, 1989; Messick, 1989; Nunnally, 1978, among others).

Within the research literature on validation of the construct of a measuring instrument, various authors have examined use of factor-analytic techniques (Carmines & Zeller, 1979; Devellis, 1991; Jackson & Morf, 1974). Especially germane in such confirmatory study, is the testing of a hypothesized structure of a measuring instrument against possible alternate structures. The technique of Procrustes Analysis is designed to facilitate this kind of evaluation (see Helmes, 1989; Jackson & Morf, 1974; Schönemann, 1966 for examples of application of Procrustean Analyses). Within this context, a new approach in Procrustes Analysis involves the testing of the hypothesized structure for optimal fit of the matrix against Monte Carlo samples of other possible structures (permutations) that may fit the matrix more optimally. These samples of other possible structures are subsequently tested against the experimenter's hypothesized structure of the matrix in terms of goodness of fit (see Heeler & Whipple, 1976; Jackson & Morf, 1974 for discussions of the theory supporting such investigation, as well as Edgington, 1987; Noreen, 1989; Manly, 1991 for an introduction of computer assisted methods of hypotheses testing). As part of the examination of the internal structure of the Avoidance of Joy Scale, the results of two Procrustes Analyses respecting the 40 and 20 item versions of the Avoidance of Joy Scale are described below.

Earlier, in Section 4.2.4 the rationale was presented for a hypothesized two-factor interpretation of the Principal-Components Analysis, with the first factor being comprised of the avoidance items and the second factor of the approach items. This hypothesized two-factor structure was tested for goodness of fit of the data with standard Procrustes procedures (Fleming, 1980; Heeler & Whipple, 1976; Helmes, 1989; Jackson & Morf, 1974; Schönemann, 1966) using Version 2.1 of the Procrustes Analysis Package (Reddon, 1992). Briefly, the Procrustes Analysis Package is a computer program (Version 2.2: Reddon, 1992) which computes statistics to compare a matrix of correlations (derived from calculating correlations among scale items) with a target matrix (the hypothesized matrix of the scale items). The program first computes a principal-components analysis of the correlation matrix, which is then rotated orthogonally to the best fit (using the least-squares criterion) with the target matrix (i.e., the hypothesized matrix). Goodness-of-fit between the rotated loadings and the target is evaluated in terms of the differences between rotated and target components based on the sum of squared errors as well as congruences. In other words, the target matrix (which represents the hypothesized structure of scale items) is evaluated against permutations of the target matrix (generated from random permutations of the rows of the target matrix), which represents other possible configurations of scale items. A Procrustes rotation (cf. Schönemann, 1966) of the component loadings is performed to each permutation of the target matrix (following a suggestion made by Jackson and Morf, 1974). The distributions of the indices of goodness-of-fit obtained for the randomly generated permutations are subsequently used to calculate directly the probability of obtaining the indices for the "true" target (i.e., equal to or better fit than the hypothesized matrix).

With respect to the Avoidance of Joy Scale, the hypothesized matrix is conceived to be characterized by a complete separation of avoidance and approach items. Thus, the testing in the Procrustes Analyses was performed on permutations of 20 item and 10 item sets with respect to the 40 item and 20 item versions of the Avoidance of Joy scale, respectively. Next, 499,999 permutations of the target matrix were generated for comparison. Although the number of generated permutations reflects only a fraction of the possible number of other configurations of the class of a 20:20 split of items within the 40 item version of the Avoidance of Joy Scale, the number of permutations used in this investigation is considerably above the number used in other research within the relevant literature. The same reasoning applies with respect to the 10:10 split of items within the 20 item version of the Avoidance of Joy Scale. All permutations of the target matrix regarding the Procrustes Analyses Package use squared multiple correlations in the diagonal. Determination of the squared multiple correlations pertaining to the Procrustes loadings were calculated from prediction of the squared multiple correlation of each keyed item (calculated from the remaining keyed items), and then added to the value obtained from prediction of the squared multiple correlation of each non-keyed item (calculated from all keyed items). The orthogonal Procrustes loadings for both the 40 and 20 item versions of the Avoidance of Joy Scale are shown in Table 4.4.

Examination of the results presented in Table 4.4 shows a clear separation of items along "approach" and "avoidance" categories. One item (#16: "I do not consider it childish to clown around") failed to load as expected, though the difference in expected versus not expected loading was only approximately one point of difference in the size of the loading. This item had previously loaded satisfactorily on the initial Principal-Component Analysis (Table 4.1). The reason for the

Table 4.4

Orthogonal Procrustes Rotated Loadings for Avoidance of Joy Scale

		40 Items		20 items	
Source		Factor I	Factor II	Factor I	Factor II
1 (5)	Approach +	-.011	.538	.124	.300
2 (1)	Approach +	.087	.333	.134	.470
3 (25)	Approach +	-.046	.414		
4 (9)	Approach +	.252	.273	.160	.606
5 (29)	Approach +	.133	.362		
6 (13)	Approach +	.210	.559	.244	.425
7 (21)	Approach +	.221	.416		
8 (17)	Approach +	.129	.535	.155	.208
9 (33)	Approach +	.037	.575		
10 (37)	Approach +	.092	.435		
11 (3)	Approach -	.169	.224	.070	.337
12 (7)	Approach -	.074	.377	.236	.713
13 (23)	Approach -	.105	.223		
14 (27)	Approach -	-.087	.611		
15 (11)	Approach -	.389	.429	.119	.733
16 (31)	Approach -	.202	.190		
17 (15)	Approach -	.296	.440	.097	.351

		40 items		20 items	
Source		Factor I	Factor II	Factor I	Factor II
18 (35)	Approach -	.055	.391		
19 (19)	Approach -	.182	.333	.069	.493
20 (39)	Approach -	.151	.260		
21 (2)	Avoidance -	.593	.174	.667	.138
22 (30)	Avoidance -	.434	.325		
23 (6)	Avoidance -	.562	.172	.737	-.048
24 (10)	Avoidance -	.577	.093	.527	.155
25 (22)	Avoidance -	.383	.221		
26 (14)	Avoidance -	.474	.230	.651	.055
27 (26)	Avoidance -	.553	.047		
28 (18)	Avoidance -	.593	-.014	.525	.098
29 (34)	Avoidance -	.527	-.078		
30 (38)	Avoidance -	.520	.108		
31 (4)	Avoidance +	.648	.224	.645	.245
32 (8)	Avoidance +	.541	.122	.514	.172
33 (12)	Avoidance +	.514	.287	.563	.288
34 (24)	Avoidance +	.444	.056		
35 (16)	Avoidance +	.642	.143	.634	.185
36 (20)	Avoidance +	.463	.221	.539	.122
37 (28)	Avoidance +	.389	.328		

		40 items		20 items	
Source		Factor I	Factor II	Factor I	Factor II
38 (32)	Avoidance +	.578	-.009		
39 (36)	Avoidance +	.534	.159		
40 (40)	Avoidance +	.629	-.173	—	—
	Variance	6.333	4.106	3.887	2.708

[a] Procrustes loadings are presented according to category and correspond to the items presented in Table 4.1. The sequential order of items corresponding to Table 4.2 appears in parentheses.

[b] Procrustes loadings for the 20 item version of the Avoidance of Joy Scale are presented in the row corresponding to the serial position of the item in the 40 item scale.

difference between the initial Principal-Component loading and the present one is likely due to the slight difference in sample sizes used in the two analyses. Rather than replace this item, it was decided to retain it in the 40 item version of the Avoidance of Joy Scale for several reasons: 1) the item is not included in the 20 item version of the Avoidance of Joy Scale; 2) the difference in loading is only marginal; 3) the marginal difference may be due to sample variation; 4) replacement of the item would necessitate insertion of a lower reliability item due to the descending order of items in the selection process; and, 5) the replaced item would possibly only capitalize on chance difference.

Within this context, the loading statistics resulted in 19 of the 20 approach items retaining the highest loading on their own factor. All 20 avoidance items had primary loadings on the hypothesized factor. Next the hypothesized structure of the Avoidance of Joy Scale (both versions), which as noted, was conceived as a two-factor structure comprised of the two orthogonal factors of avoidance and approach items, was tested for Factor Fit (Fleming, 1985). A more stringent test of Factor Fit is provided through comparison of the Congruency Coefficient of the hypothesized factor structure (Mulaik, 1972). Both comparisons are however, complementary. Interpretation of either index coefficient is similar to the interpretation of the regular correlational coefficient, with the qualification that the Congruency Coefficient is calculated from the cosine of the angle and thus does not have the mean value substracted as in the case for the regular correlation coefficient. The summary results pertaining to this comparison are presented in Table 4.5.

Examination of Table 4.5 indicates a high degree of correspondence with the hypothesized two-factor structure of the 40 item version of the Avoidance of Joy Scale. The Index of Factor Fit (Fleming, 1985) is very high (Factor I = .91; Factor II = .83, both = .88). Results for the 20 item version of the Avoidance of Joy Scale are equivalent. Indices of Factor Fit are slightly higher (Factor I = .94; Factor II = .90; both = .92) than for the 40 item version. Congruence Coefficients are similar and highly statistically significant (40 items: Factor I = .94, p = .0000002, Factor II = .87, p = .0000002; 20 items: Factor I = .96, p = 0000002, Factor II = .89, p = .0000002). Determination of the probability values for the significance of rotated component congruences were calculated directly from the 5,000,000 tests of the rotated loading to target (i.e., 4,999,999 permutations plus the hypothesized matrix = 5,000,000). These results are particularly significant and demonstrate the plausibility that the hypothesized two-factor structure of the Avoidance of Joy Scale is optimal. In each and every 5,000,000 tests, the hypothesized structure provided a superior account of the data than the structure obtained in each of the permutations of the hypothesized matrix. The probability value is thus at its maximum possibility (i.e., 1/5,000,000 = .0000002). Results for both the 20 item and 40 item versions of the Avoidance of Joy Scale were basically identical. In either case, the results are highly significant. Two further tests of the hypothesized structure of the Avoidance of Joy Scale were performed to check the validity of the analysis. Firstly, a 100,000 sample comparison was conducted wherein all scale items were unscored, reflected, and then subsequently analyzed to test fit to the matrix derived from 1, 0 and -1 scores. These results were identical to the

Table 4.5

Summary Values[a] and Error Analysis of Procrustes Analyses

	Error Summary[b]								
	Total		Keyed		Nonkeyed		Factor Fit[c]	Congruence Coefficients[d]	
Source	MSE	RMSE	MSE	RMSE	MSE	RMSE		Factor I	Factor II
40 items									
Factor I	129	358	227	476	030	173	905	942	234
Factor II	207	455	380	616	034	184	835	291	874
Total	168	410	303	551	032	179	877		
20 items									
Factor I	094	307	165	406	023	152	940	963	226
Factor II	172	414	316	562	028	167	897	271	891
Total	133	365	240	490	026	160	923		

[a] The decimals have been omitted from the values obtained.

[b] MSE = mean square error. RMSE = root mean square error.

[c] Index of Factor Fit = 1 - mean square (nonkeyed)/ mean square (total) where mean square (total) = mean square (keyed) + mean square (nonkeyed).

[d] Values for the hypothesized scale structure are entered in the columns. Values of the Rotated Matrix are entered in the rows. The statistical significance for Component I (.942) = 0.0000002, while the significance for Component II (.874) = 0.0000002 with respect to the 40 item version of the Avoidance of Joy Scale. For the 20 item version, the statistical significance of Component I (.963) = 0.0000002, while the significance of Component II (.891) = 0.0000002. All statistical significances were obtained by direct calculation of target hits across 4,999,999 permutations, where ties in hits to target were calculated as Type I error.

results obtained wherein scores of 1 and 0 were employed. The checking of results using 1, 0 and -1 scores demonstrates that the results obtained for the 1 and 0 calculations were consistent. Secondly, the hypothesized structure was tested (10,000 samples) to what extent it can be fitted when the correlation matrices are generated from a population in which there is no correlation (P = I). Herein the hypothesized structure emerged as the most optimal. Had these analyses yielded contradictory results, a serious question as to the validity of the empirical solutions would arise.

In summary of the above findings, the results of the Principal-Components Analyses (Table 4.1) strongly support an interpretation of a two-factor structure for the Avoidance of Joy Scale (both versions). The findings with respect to the Procrustes Analyses (Tables 4.4 and 4.5) confirm the initial interpretation at a very high level of statistical significance.

4.2.6 SubScale Differentiation of Content and Method Variance

Carmines and Zeller (1979) as well as DeVellis (1991), among others, have emphasized the use of Factor Analysis in providing useful information for understanding the internal structure of measuring instruments. Various results were reported earlier with respect to a Principal-Components Analyses which indicated a two-factor interpretation of the data matrix pertaining to the items comprising the Avoidance of Joy Scale (both versions). As well, the results of the Procrustes Analyses were interpreted as confirmatory for a two-factor interpretation of the data.

In as much as this investigation has drawn on the works of Carmines and Zeller (1979) as well as DeVellis (1991) regarding measurement theory, a point of observation is discussed here concerning their interpretation of the use of factor analytic technique in determination of method variance in the Rosenberg (1965) study (which was referenced by the authors of both works). More specifically, Carmines & Zeller, (1979) interpret the two-factor, Varimax-solution of positively-worded items (First Factor) and negatively-worded items (Second Factor) as evidence of unidimensionality of the latent variable of self-esteem found in Rosenberg's (1965) scale. DeVellis (1991), however, presents a less confusing illustration of a two-factor solution revolving around two dimensions of a latent variable within a scale assessing parents belief about influences on their children's health. Although a similar use of the factor analytic technique has been made in this investigation regarding the separation of avoidance and approach items in the Avoidance of Joy Scale, the observation underscored here is that Carmines and Zeller (1979) appear to have likely misinterpreted the factor analytic findings regarding positively and negatively-worded items as evidence of self-esteem (the latent variable of interest). An alternate interpretation that both factors reflect a unidimensional latent variable of method variance is equally possible and moreover likely. Further, that positively-worded and negatively-worded items are distinguishable in a two-factor solution argues more strongly that both factors are method variance reflected in two bipolar components of yea-saying and nay-saying acquiescence.

In light of the above rationale, an analysis of the 40 items comprising the Avoidance of Joy Scale was conducted in order to compare the difference between an avoidance-approach split of the items versus a split on positive-negative wording. Table 4.6 presents the correlations obtained for the 40 item version of the Avoidance of Joy Scale across 25 published measuring instruments. For the purposes of this analysis, Pearson product-moment correlations were calculated separately for the 20 "approach" as well as the 20 "avoidance" items across the variety of measuring instruments. Similarly, Pearson product-moment correlations were calculated for the 20 "positively-worded" as well as the 20 "negatively-worded" items. All calculations were obtained using the Standardization I Sample. Differences between the magnitude of the correlations obtained for the avoidance and approach items were computed in a fashion similar to that described by Carmines and Zeller (1979) and DeVellis (1991). In the DeVellis (1991) illustration, the split of items involved two conceptual dimensions rather than a split into positively and negatively worded items. As well, the differences between the correlations of the positively versus the negatively-worded items of the Avoidance of Joy Scale were also calculated in the same manner as the correlations that were calculated for the avoidance versus approach items. Differences were tested for statistical significance using the t- formula provided by Guilford (1965) for dependent correlations.

Examination of Table 4.6 indicates that no differences in correlations reached statistical significance ($\alpha = .05$) with respect to the split on positive versus negative

Table 4.6

Correlation Difference Between Comparison of Approach-Avoidance versus Positive-Negative Items

Source	Correlations[a]					
	Difference Values			Difference Values		
	Approach	Avoidance	Difference	Positive	Negative	Difference
Loneliness	162	392	234*	299	337	038
Death	-028	147	175*	062	091	029
Rejection of Self	295	321	026	359	310	049
Rejection of Others	130	284	154*	240	229	011
Rejection by Others	222	199	023	234	218	016
Avoidance Existential Confrontation	-092	-014	078	-066	-040	026
Internal/External Locus of Control	-034	002	036	-011	-019	008
Purpose in Life	024	-002	026	-022	045	067
Extraversion 1	-235	-092	143*	-185	-149	036
Extraversion 2	-273	-102	171*	-216	-166	05
Neuroticism 1	029	176	147*	095	148	053
Neuroticism 2	138	198	06	186	187	001
Psychoticism	091	156	065	113	166	053
State Anxiety	165	162	003	092	184	092
Trait Anxiety	142	131	011	116	128	012
Thrill and Adventure Seeking	-111	-132	021	-152	-113	039

Source	Correlations[a]					
	Difference Values			Difference Values		
	Approach	Avoidance	Difference	Positive	Negative	Difference
Experience Seeking	-200	-324	124[*]	-296	-288	008
Disinhibition	-180	-125	055	-187	-133	054
Sensation Seeking	-164	-186	022	-213	-168	045
Infrequency	090	327	237[*]	253	230	023
Satiation	-049	-126	077	-102	-097	005
Social Desirability	-156	-266	110[*]	-237	-235	002
Repression	-163	-054	109[*]	-138	-080	058
Eysenck Lie 1	089	120	031	086	147	061
Eysenck Lie 2	037	159	122[*]	102	127	025
Average Difference			0.089			0.036

[a] The decimals have been omitted from the Pearson product-moment correlations.

[*] Differences in correlations are statistically significant at a minimum level of at least p = .05, two-tailed. The Chi Square of the difference (2 X 2 Contingency Table) is significant beyond the p = .01 level ($X^2 = 9.32$, df = 1).

wording of items, which is less than the number of statistically significant differences expected by chance. As such, the existence of a substantial methodological or acquiescence factor within the Avoidance of Joy Scale can be essentially discounted. This finding is consistent with the expectation of reduction of acquiescence variance due to the item selection process employed in the construction of the Avoidance of Joy Scale. In underscoring this finding it can be recalled that the item selection process included selection of items for the final version(s) of the Avoidance of Joy Scale from those that had surpassed the item-total correlation hurdle with respect to the Repression Scale (considered by Wiggins, 1964 as a marker of acquiescence). As well, a second guideline for item selection of final items was based on selection of items in equal numbers from four categories of items (positively and negatively-worded avoidance items as well as positively and negatively-worded approach items).

In contrast to the findings regarding the split between positively and negatively-worded items, the results obtained for the comparison of approach versus avoidance groupings of items were dramatically different. Herein a total of 11 or nearly one-half of the differences between the approach versus avoidance correlations were statistically different. A comparison of the number of statistical different correlations between approach-avoidance differences versus positive-negative differences was statistically different ($X^2 = 9.32$, df = 1, $p \leq .01$).

In summary, these findings provide further support that the structure of the latent variable or construct of avoidance of joy can be differentiated into at least two independent factors of approach and avoidance with respect to the concept of ontologic joy. In light of the high internal consistency (Cronbach $\propto$ coefficients as well as theta and split-half coefficients) of the Avoidance of Joy Scale, the above finding supports the use of two separate subscales (one based on approach items, and one based on avoidance items). These two subscales, derived factor analytically, can be considered as two group factors (Spearman, 1904, 1926), which when combined yield a higher-order singular dimension similar to "g." Presumably the high reliability values were an indication of true variance, which also support an interpretation that the Avoidance of Joy Scale reflects a construct or latent variable that is structurally definable in two independent factor dimensions. Correlations between the scores on various dependent measures (obtained from published scales) and scores on positively-worded joy items were not statistically different from the correlations obtained between the same dependent measures and the negatively-worded joy items. This finding indicates that method variance attributable to acquiescence was not operating differentially across the direction in which the items were worded. The overall low correlation between the Avoidance of Joy Scale and the Repression Scale (Welsh, 1956), which is considered a marker of acquiescence (Wiggins, 1964), was also consistent with the above-noted interpretation.

4.2.7 Unidimensionality

Within the context of refined measurement, the critical issue regarding interpretation of scores concerns the matter of a singular latent variable versus a non-singular latent variable. The value of a conceived latent variable that is singular was outlined earlier in the investigation (also, see Carmines & Zeller, 1979; DeVellis, 1991; Feldt & Brennan, 1989; Messick, 1989; for detailed discussions of singular constructs, as well as Anastasi, 1988; Cronbach, 1990; Jackson, 1970, 1971; Nunnally, 1978 for a general discussion of the topic). A two-factor depiction of the scores was outlined as an appropriate interpretation of the structure of the Avoidance of Joy Scale. That a single test is rarely an unadulterated measure of a single trait has been generally recognized by adopters of factor-analytic approaches to scale construction. Both the error of measurement (random error) and other systematic variances (nonrandom error) typically dilute the singularity of a construct or latent variable. The matter of nonrandom error is further complicated by the presence of other variances that possibly (perhaps likely) are also congruent with the traits of individual persons. No indices are yet available in the research literature to adjudicate an acceptable percentage of variance that needs to be accounted for to indicate unidimensionality. Because factor analytic methods of scale construction are recognized to be virtually identical to biserial methods (Henrysson, 1962), it was reasoned that a further examination of the factor-analytic findings pertaining to the Avoidance of Joy Scale would assist further determination of unidimensionality.

As no exact rules yet exist as to what criteria or standards must be met to conclude unidimensional structure of a measuring instrument, evaluation of this property is somewhat arbitrary. Although a few principles have emerged in this regard, these are by no means exact. Messick (1989) has argued that identification of the internal structure of a measuring instrument remains the major priority for evaluation of validity of a scale. For this evaluation, the results of the Principal-Components Analysis obtained during the refinement of the final form of the Avoidance of Joy Scale were examined in greater detail.

A criterion for the determination of the significance for factor loadings (with respect to the first factor extracted) is the equivalent level of the regular correlation coefficient at $\alpha = .01$ (Child, 1973). Examination of Factor I loadings (unrotated) indicates that all items in both scale versions pass this criterion (at $N = 200$ and $p = .01$, $r = .138$). These findings attest to the existence of a common general factor. The percentage of total variance accounted for by the first extracted factor (unrotated) was 19.7 and 24.9 percent for the 40 and 20 item versions of the scale respectively. The fact that all items in both the 20 and 40 item versions of the Avoidance of Joy Scale were significantly loaded on Factor I in the respective analyses, as well as the sizeable percentage of variance accounted for by Factor I was consistent with the concept of unidimensionality.

A second consistency with the concept of unidimensionality of the Avoidance of Joy Scale is the distinct separation of avoidance from approach categories of scale items. As presented earlier with respect to the Principal-Components Analysis of the data matrix (Standardization I Sample), all avoidance items have the primary loading on Factor I (Varimax rotation), while all approach items load primarily on Factor 2 (also Varimax Rotation). The Procrustes Analyses confirmed the plausibility of the hypothesized two-factor interpretation. These findings indicate no differentiation with respect to a split on positive versus negative wording of items such as in the Carmines and Zeller (1979) illustration. The suppression of acquiescence variance through the procedures employed in the construction of the Avoidance of Joy Scale facilitated the distinction between the avoidance-approach structural property versus the possibility of an acquiescence (or other method variance) contamination.

Differentiation of acquiescence or other method variance from variance attributable to the latent variable or construct of interest was clearly demonstrated in this research investigation, and thus circumvented the problems of interpretation arising when method variance is embedded in the content of the latent variable. In light of these specific findings regarding acquiescence or method variance, the plausibility of unidimensionality is subsumed in the interpretation that the Avoidance of Joy Scale represents a single latent variable comprised of two factors.

A third consistency with the concept of unidimensionality of the Avoidance of Joy Scale is the high coefficients of internal consistency obtained. In order for unidimensionality to exist within the Avoidance of Joy Scale, high internal consistency or homogeneity must be indicated. The absence of a high level of internal consistency clearly implies that more than one dimension is present within a measuring instrument.

In summary of the findings, the data analyzed for this investigation strongly supported Hypothesis 1 which predicted the construction of the Avoidance of Joy Scale according to the structural property of homogeneity. Within this investigation, the concept of avoidance of joy as reflected in the dimensions of avoidance-approach of joy was demonstrated to be sensitive to scale construction. The construct of avoidance-approach of joy was shown to exist in two-factor space that was clearly definable and interpretable. Evaluation of the Avoidance of Joy Scale in terms of its other internal properties is discussed in the context of the empirical findings pertaining to Hypothesis 2.

4.3 Findings Pertaining to Hypothesis 2

Hypothesis 2 pertained to the independence of the Avoidance of Joy Scale from response style and other extraneous content variances. As the results obtained concerned the objective of constructing a scale to measure the avoidance of joy, Hypothesis 2 was conceptualized in experimental rather than statistical form: **"The scale constructed, as noted in Hypothesis 1, will be independent of content scales measuring the avoidance of death, loneliness and three varieties of rejection, as well as have only minimal overlap with the stylistic response variances".** Within the classical model of measurement such variances are considered error (random and nonrandom), which subtract from the maximization of assessing 'true variation'. Reduction of such error variances is desirable. Freedom from such variances was demonstrated empirically across both the 40 and 20 item versions of the Avoidance of Joy Scale. The specific results of the statistical analyses performed are presented below.

4.3.1 Response Styles

A specific objective in the construction of the Avoidance of Joy Scale was to minimize the overlap between response bias and avoidance of joy items. Several measures of stylistic responding were included in the study involving markers of acquiescence, social desirability, infrequency, and satiation. As well, additional validity indicators of response variance included scores from the two Lie Scales of the Eysenck Personality Scales (Eysenck & Eysenck, 1964, 1976). In addition, eight rating items pertaining to the experiences of research participants in responding to questions were examined. Summary results of the analysis pertaining to these variables are presented in Tables 4.7 and 4.8.

Examination of the results presented in Table 4.7 indicate little overlap between either of the two versions of the Avoidance of Joy Scale and the various measures of response style used during the initial scale construction process. The largest correlation found (r = .26) in the initial development sample (Standardization I) pertained to the Jackson Infrequency Scale, and evidences approximately seven percent overlap in variance. In comparison to the frequent saturation of such response style variances often found in many measuring instruments, these results are particularly satisfactory. An upward shift in overlap with response style variance can be seen in the results pertaining to the Standardization II sample where approximately a 20 percent overlap with respect to Infrequency scores and a nine percent overlap occurs with respect to Lie_2 scores (Eysenck & Eysenck, 1976: Psychoticism Inventory). Correlations are positive in this regard and consistent with the theory of ontologic joy that avoiders of joy (i.e., a high score on the Avoidance of Joy Scale) would expectantly find the topic of joy less interesting than those who prefer to approach the phenomenon. Acquiescence (as indicated by scores on the Repression Scale) and Satiation are virtually nonexistent. Up to a seven percent overlap with social desirability was evidenced. Although this overlap is slight it was consistent with expectation that those who tend to approach joy (low scores on the Avoidance of Joy Scale) would be inclined to view the phenomenon of joy in a more socially favorable direction.

Table 4.7

Summary Correlations[a] of Stylistic Response Indicators

	Standardization I				Standardization II				Standardization IV			
Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Infrequency	26^{**}	24^{**}	09	33^{**}	45^{**}	44^{**}	29^{**}	44^{**}	71^{**}	68^{**}	72^{**}	61^{**}
Satiation	-11	-07	-05	-13	-11	-07	-09	-10	-03	-02	09	-12
Social Desirability	-25^{**}	-22^{**}	-16^{*}	-27^{**}	-20	-25^{*}	-13	-19	19	-02	09	-12
Repression	-12	-12	-16^{*}	-05	-06	-04	-13	00	25	22	30	17
Eysenck Lie 1	12	10	09	12	17	21	12	16	72^{**}	71^{**}	59^{**}	72^{**}
Eysenck Lie 2	12	10	04	16^{*}	30^{**}	30^{*}	27^{*}	25^{*}	70^{**}	72^{**}	57^{**}	70^{**}

[a] The decimals have been omitted from the Pearson product-moment correlations.

* $p \leq .05$

** $p \leq .01$

Table 4.8

Summary Correlations[a] of Participant Experiences in this Research

Source	Standardization I				Standardization II				Standardization IV			
	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
few topics	08	10	19*	-03	-21	-20	-13	-20	-20	-04	14	-43
bored/interested	-02	04	07	-08	-07	00	-04	-08	-05	16	05	-12
annoyed/ not bothered	05	09	07	03	-15	-13	-19	-09	10	12	11	07
apathetic/anxious	15	19*	14	12	01	10	05	-02	14	19	15	09
hostile/cooperative	03	06	03	02	09	11	07	08	17	25	20	10
anxious/ undisturbed	19*	17*	12	20**	06	05	04	06	31	17	07	43*
tired/alert	04	06	08	01	06	12	02	07	33	34	39	20

Source	Standardization I				Standardization II				Standardization IV			
	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
cautious, guarded/ frank, open	09	10	09	06	28*	24**	12	32**	30	29	17	33

[a] The decimals have been omitted from the Pearson product-moment correlations. Ratings were assessed in terms of an agreeable/disagreeable three point choice with respect to the limited number of topics covered within a sizeable amount of provisional items (variable: few topics), and a Likert-type rating (seven points) for the other variables. High scores are anchored to the content domain presented on the left side of the bipolar variables "bored" through "cautious".

* $p \leq .05$

** $p \leq .01$

4.3.2 Research Participation

The correlations pertaining to satiation, social desirability and repression (acquiescence marker) for the Standardization IV Sample remain comparable in size to those obtained for the Standardization I and II Samples. A sizeable escalation in magnitude however, appears for the Infrequency as well as Lie 1 and Lie 2 variables. These are in the same direction as for the correlations obtained for the Standardization I and II Samples.

Although confirmatory to the prediction of the theory of ontologic joy, the magnitude of the correlation for the Standardization Sample IV are interpreted with caution in light of the relatively low number of research participants in this Sample, and the positive skew of the distribution of scores on the Avoidance of Joy Scale (2.165, 40 items; 2.045, 20 items). Although the task demand for research participants involved providing responses to a large number of provisional items (over 500 in each of four topic domains of joy, anger, meaninglessness and boredom), the task demands did not appear to be of undue influence in determining the research participants responses (see Table 4.8). Overall, the overlap of variances between the items selected for the final versions of the Avoidance of Joy Scale and the eight ratings presented in Table 4.8 are negligible. The number of statistically significant correlations is near the number expected by chance. Where statistically significant correlations do occur, all were in the expected direction—i.e., the negative aspects of research participation correspond with the avoidance end of the Avoidance of Joy Scale.

4.3.2.1. Balance in items. Several procedures for the reduction of acquiescence variance during the process of scale construction have been articulated throughout Chapter III as well as in earlier subsections of Chapter IV. A corollary of the attempt to control for acquiescence variance concerns what threat to interpretation arises viz-a-viz the findings in this investigation of disproportional item-total biserial correlations across item categories of avoidance versus approach items. Highlighted in the results reported earlier was the finding that the avoidance items retained larger alpha coefficients than approach category items when considered together as a group. The available data doesn't provide an easy resolution of the issue whether the disproportional weightings in alpha coefficients reflect the actual state of avoidance-approach to the phenomenon of joy, or whether, in fact, a covert kind of response bias was present. Consideration of the obverse (or opposite instance) of an item (discussed earlier in Chapter III) is particularly germane. This is to note that if the phenomenon of joy is an especially valued experience (as it appears to be frequently regarded in the literature and everyday experience), one might expect that the avoidance of joy would be disproportionally structured in personality style than the approach or seeking out of joyful activity and experiences. The approach item worded in the positive direction would expectantly be engaged readily. Evidence for this interpretation has been presented earlier in Subsection 4.2.3 in terms of the generally high endorsement frequencies for the approach items as a whole. Because of the relationship of the alpha coefficients to endorsement frequency (maximized at the 50 : 50 split) it is understandable that items with higher endorsement frequencies would retain less internal consistency when pitted against items closer to a 50 : 50 endorsement split.

One meaning of these findings in practice is that the avoidance-approach of joy is not a simple matter for easy scale construction, and especially so within the principle of singularity in the latent variable or construct of interest. Highlighted in this investigation was the importance of selecting items for the final form of the Avoidance of Joy Scale on criteria other than only the property of internal consistency (or homogeneity) of items. It's likely that an avoidance of joy scale comprised of content-similar avoidance items would have augmented the internal consistency of the scale. However the gain that might have been obtained through ignoring item category would be likely spurious and thus deleterious to the psychometric property of a scale that should be comprised of more rather than less balanced items. The use of a large pool of provisional items was an obvious benefit to this investigation.

4.3.3 Extraneous Variances

Five published measuring instruments were included in this research investigation as part of the procedure for selecting avoidance of joy items from the provisional pool that demonstrated item discriminant properties with respect to extraneous content dimensions. Specifically these instruments reflected variances attributable to the avoidance-approach of loneliness, death, rejection of self, rejection of others, and rejection by others. The procedure employed in the construction of the Avoidance of Joy Scale also required that a provisional item further demonstrate the psychometric property of discriminant-item validity with respect to five additional unpublished measures of avoidance-approach topic domains (guilt of omission, guilt of commission, anger, boredom, and meaninglessness).The results pertaining to these unpublished instruments were excluded from further use following the initial hurdle as these instruments are still under construction. Suffice it to note here, that all provisional joy items considered for final selection survived the criterion hurdle of demonstrating a larger item-total correlation with the Avoidance of Joy Scale than that existing between the provisional joy item and the total score of any of both these published and unpublished instruments. The final correlations pertaining to the five published instruments are presented in Table 4.9.

In as much as the scores pertaining to the scales involved in the results presented in Table 4.9 were all obtained from scales shaped in avoidance-approach domains, some overlap in variances was expected. Approximately a 16 percent overlap occurs between the Avoidance of Joy and Loneliness Scales (highest correlation: $r = 0.40$, Standardization I); while the highest correlation ($r = .42$: Standardization II) represents approximately an 18 percent overlap between avoidance of joy and avoidance of rejection of self. Overall, the average overlap in variance is approximately five percent. The yield of correlations obtained for the Standardization IV Sample reflects some increase in magnitude. Again, these correlations are confirmatory of the Hypothesis 2, however, the sample size was relatively small and should be interpreted with this in mind. This finding demonstrates considerable discriminant validity between the Avoidance of Joy Scale

Table 4.9
Summary Correlations[a] of Extraneous Validity Indicators

Source	Standardization I				Standardization II				Standardization IV			
	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Loneliness	34**	33**	16	40**	33**	33**	22**	32**	53**	51**	45**	52**
Death	08	09	-03	15*	07	14	06	05	35**	36*	34*	32
Rejection of Self	36**	33**	30**	32**	40**	42**	35**	33**	68**	66**	70**	57**
Rejection of Others	25**	26**	13	28**	34**	33**	19	36**	60**	56**	55**	56**
Rejection by Others	24**	23**	22**	20**	17	13	20	11	50**	50**	55**	40*
Average Correlation	25**	25**	22**	20**	17	13	20	11	53**	52**	52**	47**

[a] The decimals have been omitted from the Pearson product-moment correlations.

* p ≤ .05, two-tailed

** p ≤ .01, two-tailed

and avoidance-approach tendencies to five other relevant, though separate phenomenon. Within the context of these results, the above findings demonstrate considerable support for discriminant validity for both the 40 and 20 item versions of Avoidance of Joy Scale, as well as for the discriminant validity of the two-factor dimensions that were delineated in terms of separate approach and avoidance groups of joy items.

PART II. EXTERNAL VALIDITY

4.4 Focus of Part II

The remaining results pertaining to this research investigation were predicated on the construction of an Avoidance of Joy Scale which possessed satisfactory psychometric properties of reliability and validity particularly in terms of the items that comprise the scale as a whole. Findings presented in Part I of this Chapter reported results that demonstrated respectable reliability properties for both the longer and shorter versions of the Avoidance of Joy Scale, as well as for the two-factor dimensions separated according to approach and avoidance groupings of joy items. Examination of the validity properties of the Avoidance of Joy Scale up to this point have focused primarily on the construct validity component both at the item level and for the scale(s) as a whole. Although the results examined so far provide considerable support for the construct validity of the Avoidance of Joy Scale, the matter of construct validity and the validity of a measuring instrument are perpetual. Each new research investigation thus provides a new test of the validity of a measuring instrument. Several criterion-related validity studies were included as part of this research dissertation, the results of which are presented in the following sections of this chapter.

4.5. Findings Pertaining to Hypothesis 3

The findings pertaining to Hypothesis 3 were statistical in nature and thus can be set out in the form of null prediction: **"There is no relationship between scores**

on the Avoidance of Joy Scale and measures of criterion-related validity". As noted earlier in Chapter III, the difference between concurrent and predictive validity revolves around the distinction between whether a theory predicts future behavior or not. Within the validity studies undertaken for this research investigation, several were of a strong predictive nature in the sense of predicting specific concurrent behavior, while others were less certain. For the purposes of this dissertation, the less certain predictions were allocated to exploratory research, and are presented under the next section: i.e., Findings Pertaining to Hypothesis 4. All data examined with respect to the Standardization I and II Samples were gathered concurrently. Notwithstanding that predictive studies tend to involve behavior at a future date, the prediction of findings included in this section of the investigation are derived from the theory of ontologic joy. Thus these findings reflect a stronger test of the validity of the construct of ontologic joy than exists for co-temporaneous data. Interpretation of the findings following immediately, if supportable, are thus confirmatory evidence of validity.

4.5.1 Criterion - Related Validity

4.5.1.1 Confirmatory studies. Described earlier in Section 4.4 were the results of correlational analyses of the relationship between the Avoidance of Joy Scale and five other measures of approach-avoidance to other topic domains. These correlations were rather small (in the order of about a five percent overlap on average in variance for both the Standardization I and II Samples), however, all correlations were consistently in the anticipated direction. Relevant correlations for the Standardization IV Sample were appreciably higher, and in the expected direction, though the relatively small sample and skewness of the distribution of scores on the Avoidance of Joy Scale suggest some caution be exercised in the interpretation of those results. Scores on measuring instruments designed to assess approach-avoidance tendencies can be expected to be related positively. This finding (see Table 4.9) provides further confirmatory support for the validity of the Avoidance of Joy Scale.

A second series of correlational analyses pertained to the relationship between scores of the Avoidance of Joy Scale and scores pertaining to several self-rating measures of concurrent validity. Table 4.10 shows the validity coefficients obtained on various attitudinal and behavioral self-rating scales believed to bear a conceptual link to the dimension of ontologic joy. For the 40 item version of the Avoidance of Joy Scale, of the 14 variables considered, 12 of the validity coefficients were in the predicted direction, with six reaching statistical significance pertaining to the Standardization I Sample. All 12 of these coefficients were replicated in both the Standardization II and Standardization IV Samples in terms of direction of the relationship, with seven and four of the correlations reaching statistical significance respectively. Virtually an identical distribution was found for the 20 item version of the Avoidance of Joy Scale. Not surprisingly, the coefficients that arose in the non-predicted direction represented joy related activities that are ubiquitous in everyday life, i.e., "read articles or listen to TV or radio programs about: (i) joy, and (ii) excitement." Such repetitious everyday experiences are basically innocuous and thus

Table 4.10

Validity Coefficients for Joy Related Variables

	Source	Correlation Coefficients [a]					
		Standardization I		Standardization II		Standardization IV	
		40 items	20 items	40 items	20 items	40 items	20 items
1[b]	How inclined are you to participate in:						
	a) a joyful activity	-36**	-35**	-41**	-39**	-58**	-67**
	b) a pleasurable activity	-40**	-40**	-17	-17	-57**	-55**
	c) an exciting activity	-32**	-29**	-40**	-35**	-20	-24
2[b]	How inclined are you to visit person who has intense feelings of:						
	d) joy	-21**	-21**	-41**	-40**	-49**	-39*
	e) excitement	-21**	-22**	-26*	-24**	-34	-19
	f) friendliness to humankind	-12	-15*	-28**	-36**	-35	-27
3[c]	How often do you:						
	g) think about joy	-04	-04	-21	-18	-34	-35
	h) think about excitement	-14	-15*	-04	-02	-37*	-41*
	i) talk to friends about joy	-22**	-20**	-20	-22*	-26	-27
	j) Talk to friends about excitement	-12	-10	-20	-14	-14	-20

Source	Standardization I 40 items	Standardization I 20 items	Standardization II 40 items	Standardization II 20 items	Standardization IV 40 items	Standardization IV 20 items
k) Read articles or listen to TV or radio programs about joy	08	10	-07	-03	17	09
l) Read articles or listen to TV or radio programs about excitement	07	08	08	16	11	11
m) Talk to a person about experiencing joy	-12	-09	-25^{*}	-19	-28	-32
n) Talk to a person who is experiencing excitement	-11	-10	-28^{**}	-21^{*}	-32	-37^{*}

[a] The decimals have been omitted from the Pearson product-moment correlations.

[b] Response Alternatives: 1) not at all, 2) a little, 3) somewhat, 4) considerably, 5) very much.

[c] Response Alternatives: 1) never, 2) about once a year, 3) about every 3 months, 4) about once a month, 5) about once a week.

would not be expected to possess much discriminatory power because of the nonsystematic nature of the activity.

Table 4.11 shows the results of several correlational analyses across a variety of published instruments germane to the construct of ontologic joy. Individuals who approach joy would be expectantly, in the main, more closely involved with joy related activities in general than those inclined to avoid joyful activity. Thus the approach of joyful activity would be related (not confined) to a proactive view of such experiences. As such negative correlations were predicted for seeking-out activities: Thrill & Adventure, Experience, Disinhibition, and Sensation (measured herein by the Zuckerman Scales) as well as Extraversion (measured herein by the Eysenck scale). Positive correlations were predicted for both State and Trait anxiety, as well as Neuroticism, and Psychoticism (measured herein by the Spielberger and Eysenck Scales respectively). In as much as ontologic joy reflects some bipolarity (open to external manifestations of joy yet oriented to a value structure supportive of goodness) some offset would be expected with respect to such measures as internal versus external locus of control and purpose in life. Measures such as Rotter's Internal/External locus of Control Scale, as well as Crumbaugh and Maholick's Purpose In Life Scale are non-differential and somewhat irrelevant to the construct of ontologic joy. Nonrelationship findings are prejudiced in favor of statistical null-relationships. Such null-relationships, or the absence of such relationships, however, are to some degree confirmatory in that such evidence specifies what a construct is not. Lastly, a specific measure of avoidance of a phenomenon can be expected to be related to a measure of avoidance of a

Table 4.11

Summary Correlations[a] of External Relationship Indicators

	Standardization I				Standardization II				Standardization IV			
Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Avoidance Existential Confrontation	-06	-07	-09	-01	19	23*	02	24*	13	16	06	18
Internal/External Locus of Control	-02	-01	-03	00	-00	-01	01	-01	28	26	34*	20
Purpose in Life	01	01	02	-00	-06	-07	-04	-06	-08	-12	-09	-06
Extraversion 1	-18*	-16*	-23**	-09	-30**	-32**	-16	-32**	14	07	21	06
Extraversion 2	-20**	-19**	-27**	-10	-20	-23*	-14	-18	03	-03	10	-03
Neuroticism 1	13	11	03	18*	-00	01	-03	02	43*	41*	50**	31
Neuroticism 2	20**	19**	14	20**	06	07	04	05	40*	38*	44**	32
Psychoticism	15*	16*	09	16*	29**	31**	08	35**	69**	63**	68**	61**
State Anxiety	17**	16*	09	18*	14	07	12	12	31	27	30	28
Trait Anxiety	14	13	12	13	16	13	16	14	22	19	27	15

Source	Standardization I				Standardization II				Standardization IV			
	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Thrill and Adventure Seeking	-14*	-13	-11	-13	-34**	-34**	-16	-37**	10	03	25	-03
Experience Seeking	-31**	-31**	-20**	-32**	-41**	-36**	-20	-43**	01	-01	20	-14
Disinhibition	-17*	-17*	-18*	-12	-25*	-19	-18	-23*	15	11	27	02
Sensation Seeking	-20**	-20**	-16*	-19**	-38**	-34**	-20	-40**	16	11	32	01

[a] The decimals have been omitted from the Pearson product-moment correlations.

[*] $p \leq .05$, two-tailed

[**] $p \leq .01$, two-tailed

collection of phenomenon. Thus a small, though positive relationship between the Avoidance of Joy Scale and the Avoidance of Existential Confrontation Scale was anticipated.

Examination of Table 4.11 reveals all correlations that are statistically significant to be in the anticipated direction predicted by the theory of ontologic joy. Taken as a whole, these findings provide confirmatory evidence for the construct of ontologic joy in the context of both the initial Standardization Sample I and two cross-referent samples (Standardization II and Standardization IV). Although confirmatory of the construct of ontologic joy from an operational point of view, the reader is alerted that such confirmatory evidence bears questionable significance of utility, an issue which will be taken up later in Chapter V. For example, conjunctive to the issue of confirmatory evidence and the conceptual foundation on which it is based are the results of a more detailed analysis of the items comprising the Avoidance of Existential Confrontation Scale. Taken at face value, this scale is conceptually the most germane to the general phenomenon of ontology among the scales (all published) included in Table 4.11. Each of the 36 items comprising the Avoidance of Existential Confrontation Scale (AEC) are Likert-type in design. Many of the items represent bipolar concepts within the literature of ontology, while the remainder represent anchors that are “obverses” of each other, also reflective of the classical and philosophical literature of the ontological persuasion. An item by item analysis of the correlations between each AEC item and the Avoidance of Joy Scale (40 item version) was performed. Chance correlations at (α = .05) can be expected to be statistically significant twice in 40 correlations. Six analyses yielded statistically significant correlations in the Standardization I Sample and three in the Standardization II Sample (two which were on the same variable as for the Standardization I Sample). None of the correlations in the Standardization IV Sample reached statistical significance. For illustrative purposes, the corresponding items together with the correlational coefficient that reached statistical significance in the Standardization I Sample are presented in Table 4.12. Of these statistically significant correlations, five are negative in relationship. Though not presented, of the possible 36 correlations with the AEC scale, 21 were in the negative direction (Standardization I Sample). In the Standardization II Sample, 12 of the correlations were in the negative direction, while none were in the negative direction in Standardization Sample IV. Taken together 42 of the 108 possible correlations were negative in direction.

4.5.1.2. Contrasted groups. Throughout the process of scale construction, emphasis was placed on the use of procedures to augment the discriminant validity of the individual items comprising the Avoidance of Joy Scale. A variety of results have been presented which provide strong psychometric support that the items comprising the Avoidance of Joy Scale possess the property of discriminant validity. It follows that if individual scale items possess the psychometric property, then this property should also be evident in the collection of items as a whole. The use of the contrasted group method was chosen to test whether significant differences existed on several dependent measures germane to the latent variable of interest. As the data analysis pertaining to this aspect of validation of the Avoidance of Joy Scale were derived from the theory of ontologic joy, the results obtained serve as a test

Table 4.12

Correlations Between the Avoidance of Joy (40 items) and the Avoidance of Existential Confrontation Scales

AEC Item	Item	Standardization Sample	r
10	It is quite: certain what happens after death***/uncertain what happens after death	I	.14*
11	Love is: both agony and joy/not both agony and joy***	II	.28**
13	Genuine personal relationships are: beneficial***/futile	I	-.14*
		II	-.33**
16	When a tragedy happens, I: am particularly upset***/not particularly upset	I	-.14*
27	If I am not involved in what is going on, I am: displeased***/ not displeased	I	-.25**
34	If anxiety constantly befalls me, I: do not get frustrated/ get frustrated***	I	-.20**
35	I: do not get upset if I lose something valuable/get upset if I lose something valuable***	I	-.14*
36	I am: not open to all unharmful experiences***/open to all unharmful experiences	II	.22*

* $p \leq .05$, two-tailed

** $p \leq .01$, two-tailed

*** anchor accorded avoidance direction

of the construct of ontologic joy believed to be embedded in the Avoidance of Joy Scale through which the construct of ontologic joy was conceived to be measured.

Although contrasted groups (comprised of highest and lowest scores) are expected to maximally discriminate at the cutoff points of highest 27% and lowest 27% of the distribution (Kelley, 1939), these percentages could not be maintained exactly due to the discrete nature of specific scores on the Avoidance of Joy Scale. Thus the groups comprised of highest and lowest scores on the Avoidance of Joy Scale were unequal in the number of research participants contained within them. Based on the assumption that discriminant validity should be evident across the complete range of the Avoidance of Joy Scale, a third comparison group (comprised of "Medium" scores) was included in the data analysis. Composition of the three groups was determined on the distribution of scores of the Avoidance of Joy Scale (separately for both versions) according to the different levels of frequencies of scores obtained for the Standardization I Sample. For reasons of consistency, the same cutoff levels were used in the analyses pertaining to both the Standardization II and Standardization IV samples. For the 40 item version of the Avoidance of Joy Scale, the corresponding cutoff scores were Low ≤ 3 and High ≥ 11, while for the 20 item version of the corresponding cutoffs were Low ≤ 1 and High ≥ 5. Actual frequencies are near target and are shown in Table 4.13, which presents the resulting configurations of membership for each of the Standardization Samples.

Because of the positive skew in each of the samples [Standardization I = 0.967 (40 items), 1.161 (20 items); Standardization II = 0.859 (40 items), 0.870 (20 items); Standardization IV = 2.165 (40 items), 2.045 (20 items)] the results of

Table 4.13

Number of Cases Comprising the Low, Medium, and High Scorer Groups on the Avoidance of Joy Scale

	Scale		Targeted N of Cases			Actual N of Cases		
Sample	Version	Skewness	Low	Medium	High	Low	Medium	High
Standardization I	40	0.967	54	92	54	62	84	54
	20	1.161	54	92	54	61	77	62
Standardization II	40	0.859	24	40	24	23	44	21
	20	0.870	24	40	24	29	31	28
Standardization IV	40	2.165	9	17[a]	9	6	2[b]	27
	20	2.045	9	17[a]	9	10	13	12

[a] Because of the splitting of one case due to percentage, this case was added to the medium group.

[b] This distribution is particularly irregular, however was retained for comparison on criterion consistency rather than on parameter of distribution of frequency scores.

the data analyses must be interpreted according to the amount of skewness in them. In this regard, the overall score mean for each of the samples is low. Thus, discrimination in actuality is a considerably more stringent test than if the score means were nearer to the theoretical means of 20.0 for the 40 item version and 10.0 for the 20 item version of the Avoidance of Joy Scale. The expectant effect in the data analyses (because of the positive skew to the score distribution) is a decrease in the number of statistical differences than would likely be the case if a more normal distribution of scores were present in the available data (cf. MacLennan, 1988). The reader is alerted to the irregular shape of the distribution of membership of the scorer groups in the Standardization IV Sample (40 item analysis). Therein the "medium group" is comprised of three times the targeted number of cases. This configuration was kept for analysis in the form that it arose for reasons of consistency in cutoff scores regarding the Avoidance of Joy Scale, rather than re-dividing the group for purposes of control of frequency. Thus the analysis pertaining to the 40 item version (i.e., the Standardization IV data) should be interpreted with this caveat in mind.

Pearson correlations were calculated, as well as Oneway Analyses of Variance and the corresponding Aposterori tests (Duncan & Scheffe) across three sets of variables held to be intrinsically related to the construct validity of the theory of ontologic joy: a) the no-reward element, b) character related to goodness; and c) empathic concern which was conceived as also reflective of the element of goodness. Another set of data analyses, related to the extrinsic validity or external manifestations of the avoidance of joy, involved examination of the variables of

Neuroticism and Psychoticism as measured by the Eysenck & Eysenck (1963, 1976) scales.

Within this context, Table 4.14 presents the list of dependent variables believed to reflect either intrinsic or extrinsic manifestations of the construct of ontologic joy. Table 4.14 also shows the separate Pearson product-moment correlations between these dependent measures and scores on both the 40 and 20 item versions of the Avoidance of Joy Scale. Examination of Table 4.14 indicates that approximately one-third of the intrinsic variables and two-thirds of the extrinsic variables yielded correlations that were statistically significant. In light of the characteristics of the data samples -- i.e., skewedness of distributions, restriction in range, and other similar nuances (which tend to affect the size of the correlations produced), coupled to the imposition that the construct of ontologic joy is believed to be restricted in this application due to the tenet of hierarchical order of development, these results are strong evidence for construct validity. A more detailed analysis of the relationship between the construct of ontologic joy and both the intrinsic and extrinsic variables is provided in the results of Oneway Analyses of Variance for the Contrasted Groups (presented in Table 4.15) and the corresponding Aposterori Comparisons (presented in Table 4.16). Because this research is a first study of the topic domain, both the Duncan and Scheffe tests were performed in the Aposterori Comparisons. The Scheffe test provides a stringent evaluation, while the Duncan Test is included as a hedge against Type II error. Examination of Tables 4.15 and 4.16 reveal that approximately the same number of

Table 4.14

Summary Correlations^{a} of Construct-Related Variables^{b}

Source	Standardization I		Standardization II		Standardization IV	
	40 items	20 items	40 items	20 items	40 items	20 items
A. Intrinsic						
1. Reward						
a) No one needs to be paid***/ Someone needs to be paid			-26*	-22*		
b) Expect a reward***/don't expect a reward.	-19**	-19**				
c) Combined (a + b)						

Source	Standardization I		Standardization II		Standardization IV	
	40 items	20 items	40 items	20 items	40 items	20 items
2. Character						
d) When it counts I: have the courage of my convictions/don't have the courage of my convictions***			45**	43**		
e) I'm: decisive when it comes to enforcing principles/wishy-washy when it comes to enforcing principles***					33	43*
f) I'm: courageous/a coward***						
g) Combined (d + e + f)	14*	13	32**	32**	27	36*
3. Empathy						
h) Would it upset you a lot to see a child or an animal suffer (0 = yes, 1 = No***)	21**	23**	24*	20	70**	68**

Source	Standardization I		Standardization II		Standardization IV	
	40 items	20 items	40 items	20 items	40 items	20 items
i) Would you feel very sorry for an animal caught in a trap (0 = yes, 1 = no***)					70**	68**
	j)	Combined (h + i)		18*	20**	70**68**
B. Extrinsic						
1. Neuroticism						
a) Eysenck 1	13	11	-00	01	43*	41*
b) Eysenck 2	20**	19**	06	01	43*	41*
2. Psychoticism	15*	16*	29**	31**	69**	63**

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[a] The decimals have been omitted from the Pearson product-moment correlations.

[b] These variables were selected on the basis of their relevance to the construct of ontologic joy. Items "h" and "i" are items drawn from the Eysenck Psychoticism Inventory (Eysenck & Eysenck, 1976) and are reflected for scoring. Items "a" and "b" are reflected.

[*] $p \leq .05$

[**] $p \leq .01$

Table 4.15

Summary Statistics[a] for Oneway Analysis of Variance of Construct-Related Variables

Source	Scale	Sample	MS_b	MS_w	F	df_b/df_w	p
A. Intrinsic							
1. Reward							
a) No one needs to be paid	40 items	II	3.64	1.48	2.46	2,82	.0913
b) Expect a reward	40 items	I	5.42	2.19	2.47	2,191	.0869
		II	4.71	1.39	3.39	2.83	.0385
	20 items	I	8.98	2.15	4.17	2,191	.0169
c) Combined (a + b)							
2. Character							
d) Lack courage of convictions	40 items	II	10.06	0.86	11.71	2,82	.0000
	20 items	I	6.59	1.84	3.59	2,191	.0296
		II	6.43	0.95	6.78	2,82	.0019
		IV	3.07	0.93	3.32	2,29	.0505
e) Wishy-washy	40 items	II	6.17	1,89	3.27	2,82	.0496
	20 items	II	5.69	1.90	3.00	2,82	.0553

Source	Scale	Sample	MS_b	MS_w	F	df_b/df_w	p
		IV	5.47	0.87	6.27	2,29	.0054
f) coward							
g) combined (d + e + f)	40 items	II	32.58	5.70	5.71	2,81	.0048
	20 items	I	28.20	10.18	2.77	2,191	.0652
		II	20.85	5.99	3.48	2,81	.0355
		IV	29.11	4.16	6.99	2,29	.0033
3. Empathy							
h) Animal suffering	40 items	I	0.147	0.028	5.26	2,197	.0060
	20 item	I	0.120	0.028	4.23	2,197	.0159
i) Animal in a trap							
j) Combined (h + i)	40 items	I	0.398	0.124	3.21	2,196	.0425
		IV	3.07	0.93	3.32	2,29	.0505
	20 items	I	0.358	0.124	2.88	2,196	.0588
B. Extrinsic							
1. Neuroticism							
a) Eysenck 1	40 items	I	75.62	25.71	2.94	2,197	.0551
	20 items	I	87.46	25.59	3.42	2,197	.0347
b) Eysenck 2	40 items	I	172.02	26.93	6.39	2,197	.0021
	20 items	I	164.12	27.01	6.08	2,197	.0028

Source	Scale	Sample	MS_b	MS_w	F	df_b/df_w	p
2. Psychoticism	40 items	I	21.69	7.52	2.88	2,197	.0582
		II	40.76	5.75	7.09	2,85	.0014
		IV	66.74	16.60	4.02	2,32	.0277
	20 items	I	20.98	7.53	2.79	2,197	.0640
		II	23.58	6.15	3.83	2,85	.0255

[a] Statistics are entered for only those variables which produced statistically significant differences in Aposterori Comparisons. MS_b = the Between Mean Square; MS_w = the Within Mean Square; df_b/df_w = the degrees of freedom associated with Between Groups and Within Groups, respectively.

Table 4.16

Aposterori Comparisons of Construct-Related Variables

			Contrasted Groups									
			Low			Medium			High			Aposterori Comparisons[a]
Source	Scale	Sample	Mean	St.Dev.	N	Mean	St.Dev.	N	Mean	St.Dev.	N	
A. Intrinsic												
1. Reward												
a) No one needs to be paid	40	II	5.22	1.05	27	5.48	1.29	31	4.78	1.28	27	Duncan 2*3
b) Expect a reward	40	I	4.45	1.36	60	4.19	1.45	81	3.83	1.65	53	Duncan 1*3
		II	3.77	1.31	22	4.57	1.07	44	4.40	1.27	20	Duncan 1*2 Scheffe 1*2
c) Combined (a + b)	20	I	4.36	1.41	59	4.39	1.51	74	3.72	1.47	61	Duncan 1*3, 2*3 Scheffe 2*3
2. Character												
d) Lack courage of conviction	40	II	2.09	0.68	22	2.18	0.90	44	3.32	1.20	19	Duncan 1*3, 2*3 Scheffe 1*3, 2*3

Source	Scale	Sample	Low			Medium			High			Aposterori Comparisons[a]
			Mean	St.Dev.	N	Mean	St.Dev.	N	Mean	St.Dev.	N	
	20	I	2.17	1.13	59	2.65	1.44	74	2.80	1.45	61	Duncan 1*2, 1*3 Scheffe 1*3
		II	2.00	0.67	28	2.32	0.94	31	2.96	1.25	26	Duncan 1*3, 2*3 Scheffe 1*3
		IV	2.13	0.99	8	1.54	0.66	13	2.55	1.21	11	Duncan 2*3
e) Wishy-Washy	40	II	3.24	1.34	21	2.66	1.40	44	3.55	1.36	20	Duncan 2*3
	20	II	3.15	1.51	27	2.55	1.18	31	3.41	1.45	27	Duncan 2*3
		IV	2.25	1.04	8	2.54	0.88	13	3.64	0.92	11	Duncan 1*3, 2*3 Scheffe 1*3, 2*3
f) Coward												
g) Combined (d+e+f)	40	II	8.19	1.86	21	7.93	2.50	44	10.11	2.62	19	Duncan 1*3, 2*3 Scheffe 1*3, 2*3
	20	I	7.76	2.58	59	8.64	3.52	74	9.11	3.30	61	Duncan 1*3

Source	Scale	Sample	Low			Medium			High			Aposterori Comparisons*
			Mean	St.Dev.	N	Mean	St.Dev.	N	Mean	St.Dev.	N	
		II	8.07	2.07	27	7.97	2.32	31	9.54	2.92	26	Duncan 1*3, 2*3
		IV	7.75	1.83	8	6.62	2.10	13	9.73	2.10	11	Duncan 1*3, 2*3 Scheffe 2*3
3. Empathy												
h) Animal suffering	40	I	0.00	0.00	62	0.12	0.11	84	0.09	0.29	54	Duncan 1*3, 2*3 Scheffe 2*3
	20	I	0.16	0.13	61	0.00	0.00	77	0.08	0.27	62	Duncan 1*3, 2*3 Scheffe 2*3
i) Animal in trap												
j) Combined (h + i)	40	I	0.07	0.25	61	0.10	0.30	84	0.22	0.50	54	Duncan 1*3, 2*3
	20	I	0.08	0.28	60	0.08	0.27	77	0.21	0.48	62	Duncan 1*3, 2*3
B. Extrinsic												
1. Neuroticism												
a) Eysenck 1	40	I	9.26	5.20	62	10.80	4.72	84	11.44	5.43	54	Duncan 1*3
	20	I	9.10	4.92	61	10.96	5.00	77	11.29	5.26	62	Duncan 1*2, 1*3

			Low			Medium			High			Aposterori Comparisons[a]
Source	Scale	Sample	Mean	St.Dev.	N	Mean	St.Dev.	N	Mean	St.Dev.	N	
b) Eysenck 2	40	I	9.08	5.22	62	11.38	5.10	84	12.39	5.29	54	Duncan 1*2, 2*3 Scheffe 1*2, 2*3
	20	I	9.05	5.21	61	11.48	5.27	77	12.13	5.09	62	Duncan 1*2, 2*3 Scheffe 1*2, 2*3
2. Psychoticism	40	I	2.89	2.89	62	3.10	2.46	84	4.04	2.98	54	Duncan 1*3
		II	2.35	2.40	23	2.52	1.75	44	4.71	3.39	21	Duncan 1*3, 2*3 Scheffe 1*3, 2*3
		IV	3.00	3.65	7	2.20	1.54	20	7.00	7.62	8	Duncan 2*3 Scheffe 2*3
	20	I	2.95	2.92	61	3.00	2.31	77	3.97	3.05	62	Duncan 2*3
		II	2.48	2.21	29	2.52	2.05	31	4.07	3.10	28	Duncan 1*3, 2*3

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[a] Duncan's Multiple Range Test was used throughout the Aposterori analysis as a protection against Type II error. The Scheffe criterion was included for a more stringent comparison of difference among the contrasted groups. All Aposterori comparisons presented are $p \leq .05$. An asterisk between any two group numbers (low = 1, medium = 2, high = 3) represent a statistically significant difference.

statistical significant differences arise as were reflected in the Pearson correlations (Table 4.14) regarding the same variables.

Taken together, the results presented in Tables 4.14 through 4.16 indicate strong support for discriminant validity of both the 40 and 20 item versions of the Avoidance of Joy Scale. Of the 60 comparisons with respect to the variables considered intrinsic of the construct of ontologic joy, approximately one-third yielded statistically significant differences. One-half of the 18 comparisons related to variables considered extrinsic manifestations of the construct of ontologic joy yielded differences that were statistically different. The number of statistically significant differences obtained (over one-third in total) are considered very satisfactory in light of the stringent testing for such differences in distributions of scores that were quite positively skewed with respect to scores on the Avoidance of Joy Scale from which the "constructed groups" were categorized. Secondly, the application of the theory of ontologic joy was superimposed on extant joy-related items of an existing database rather than on data obtained from items that were more precisely formulated to reflect the idea of goodness as compared to joy evoked from happiness or pleasure. Thirdly, a basic tenet within the theory of ontologic joy is hierarchical development. Although no parameters were available in the database to determine the level of development of the individuals contained in the database, the sample was likely quite restricted to levels II – III, which is the level found to vastly predominate (Dabrowski, 1967, 1970) among university and quasi-university educated persons. According to the theory of ontologic joy, pleasure and happiness are more characteristic at lower levels of hierarchical development, while joy evoked from goodness becomes more manifest at the higher states of Level III upward through Level IV into level V. Interpreted within the context of the three features of the data described immediately above, the results are considered very conservative with respect to the viability of the construct of ontologic joy as an explanatory concept.

Because these tests of discriminant validity were derived from the theory of ontologic joy, the results are considered supportive of the construct validity of the Avoidance of Joy Scale. These results are considered sufficiently strong to uphold the premises of no-reward, character related to the idea of goodness, and empathy (also related to the idea of goodness), which are expectations of the theory of ontologic joy in terms of intrinsic manifestations or internal validity of the construct. Similarly, the results pertaining to neuroticism and psychoticism were also sufficiently strong to uphold the premise of external validity of the construct or latent variable presumed to be the avoidance of ontologic joy. These findings thus further support the theory of ontologic joy (and the theory of positive disintegration from which several of its basic tenets were derived) as to the construct validity of both the specific and the general theoretical forms.

4.6 Findings Pertaining to Hypothesis 4

The intent of the last series of studies undertaken for this investigation was to discover potential relationships to the avoidance of joy. Thus, Hypothesis 4 was also statistical in nature: **"There is no relationship between scores on the Avoidance of Joy Scale and scores on measures of strain to life stresses, substance use, as well**

as other social and health related variables". This specific series of studies was focused on variables which were perceived to have some degree of social impact and/or personal implications. Three categories of variables were selected for such study: strain associated with life stresses, substance use, and social as well as health-related variables.

More specifically, in the theory of ontologic joy, life's difficulties are held to be sources for growth in character. Strains associated with life stresses are commonplace, perhaps to all people. How individuals deal with life's strains and difficulties can serve growth forces of the personality or can serve up defeat. Virtually no statistical data is known (that has been analyzed empirically) to assess the existence of a relationship between the idea of ontologic joy and any index pertaining to strain values to stress.

In considering the general picture of individual life style, it is common for many individuals to participate in drug and substance use. Although it is recognized that in some people's viewpoint the use of alcohol, drugs, or other substances can serve growth enhancement. The postulate regarding the drug and substance phenomenon within the theory of joy is that such participation in drug and substance use is self-reducing as a person moves toward higher-order development.

Similarly, that individual life choices (at least some of them are instrumental to certain consequences) would coalesce to reflect an overlap of scores on the Avoidance of Ontologic Joy with various social and health-related indices was of interest. Occurrences of behavioral consequences are expected with respect to the construct of ontologic joy. As articulated earlier in this investigation, the latent variable of interest (i.e., the avoidance of joy) is held to be causal with respect to the "true" variance of the latent variable (cf. DeVellis, 1991). Tracking the route of the causal pathway can conceivably be commenced at any point of the relationship being considered. For the purposes of this research investigation, the study of causal relationships in this domain was commenced at the point of uncovering which behavioral phenomenon bear an overlap with scores on the Avoidance of Joy Scale.

Data relevant to these three areas of topical interest were available in the database as noted earlier in Chapter III. The results of analyses performed in this regard are presented below.

4.6.1 Strain

Although the term "strain" is relatively new as a replacement for the term "stress" (cf. Eysenck, 1988), the following description will also employ the term. Table 4.17 presents the summary correlations between scores on the Avoidance of Joy Scale and a wide selection of stimuli concerning life events, experiences, and perceptions. In considering these correlation coefficients the reader is alerted to one of the salient features of the data regarding "strain values," namely these values were obtained through a procedure where respondents provided numerical values that were open-ended. Earlier work (Thauberger, 1989) found that the raw value provided a clearer understanding of the property of these numbers as compared to either logarithmic or transformed conversion. Thus the regular Pearson product-moment correlation was considered sufficient for the analysis undertaken herein.

Table 4.17

Summary Correlations[a] for Life Events, Experiences and Perceptions

	Standardization I				Standardiization II				Standardization IV			
Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Loneliness					20	16	28**	10				
Snakes					26*	29**	22*	22*				
Criticism					20	20	27*	10				
Fate (to others)					29**	30**	19	27**				
Minor law infraction					32**	25*	22*	30**				
Insects					43**	43**	33**	39**				
Ridicule					21	17	12	21*				
Child Abuse					-21	-22*	-18	-17				
Receiving an expensive present from someone you don't want to be involved with	-14*	-13	-12	-12								

Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Sexual molesting of a child by a family member					-21	-22*	-18	-18				
Cemetery	09	08	-04	16*					47**	46**	16	56**
Eating alone	21**	21**	12	24**					59**	63**	20	71**
Alien creatures	-09	-09	-19**	01	24*	14	06	29**				
Sweet odor of food	15*	15*	08	16*	22*	21	14	21	39*	36	11	48*
Having to make something creative	13	13	03	17*								
The coming of the Lord	15*	15*	11	14*								
Sasquatch					25*	17	09	28**				
Big Foot					25*	17	09	28**				
Sight of mouth watering food	11	10	04	14*								
Speeding above posted												

Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
speed limit					27^{*}	25^{*}	09	31^{**}				
Flying in a small aircraft					25^{*}	25^{*}	13	26^{*}				
Having a joke told on another	12	13	14^{*}	07								
Going to a large family reunion	16^{*}	12	07	19^{**}					38^{*}	34	23	38^{*}
Attending a major festival	12	09	03	17^{*}					35	33	18	38^{*}
Alcohol	15^{*}	13	08	16^{*}					50^{**}	40	36^{*}	48^{**}
Dirty diapers of family member	14^{*}	12	08	16^{*}	27^{**}	26^{*}	16	28^{**}				
Trying foreign food	15^{*}	15^{*}	06	18^{*}								
Expressing affection to loved one in public	19^{*}	16^{*}	15^{*}	17^{*}	29^{**}	24^{*}	30^{**}	21^{*}				
Winning a game of chance					31^{**}	22^{*}	21	30^{**}	36	36	18	39^{*}

Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Doing an intelligence test	14	15*	01	21**								
Eating alone in public	25**	24**	14	27**	19	15	06	22*				
Driving across a high bridge	11	06	03	15*	28**	25*	16	28**	34	34	15	39*
Being too tired					16	12	01	22*				
Flying in a large airplane	11	08	04	14*								
Horseback riding	25**	24**	18	24**								
Out in the woods alone					26*	24*	19	24*				
Catching a big fish	24**	25**	17*	23**								
Riding horseback	24**	25**	16*	25**								
Waking up in the morning by 7 o'clock	16*	18*	-00	24**	27*	23*	28**	20				
Power outage at home	17*	17*	11	17*	26*	22*	20	23*				
Visit a medical doctor	11	09	03	14*								

Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Missing a regular meal	12	14	02	17*	18	16	06	22*	45*	49**	23	49**
Truth (minor issue)					22*	19	13	23*				
Being too thin					24*	21*	29**	14	47**	51**	23	51**
Wishy washiness in others					20	09	07	22*				
Going to work	17*	15*	11	18*								
Not having good clothes	14*	16*	02	20**								
A stranger smiling at you					24*	23*	19	22*	26	39*	11	30
Xeroxing 50 pages	16*	16*	02	23**								
Eating a bowl of strawberries	19**	17*	11	21**	33**	29**	28**	27*				
Use of aspirin	15*	15*	07	17*	41**	32**	32*	36*				
Use of alcohol	18*	17*	13	18*	20	17	09	22*				
Use of medication					26*	22*	13	27**				

Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Flooded basement at home					21	15	08	23*				
Blocked toilet at my own home					24*	21	15	24*				
Condemnation of another									37*	34	34	30
Rejection shown to you by a stranger									34	32	19	36*
Fatigue									28	19	-01	40*
Kindness shown to you by a family member									34	30	15	38*
Kindness shown to you from a family member									39*	38*	20	43*
Kindness shown to you from an organization you dislike									40*	43*	19	44*
Kindness shown to you from a stranger									34	41*	23	33

Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Someone you like kissing you in public									32	36	12	37^{*}
Full moon									39^{*}	37^{*}	18	44^{*}
Receiving an expensive present from another who you did not buy a present for									29	31	06	37^{*}
Ghosts									50^{**}	51^{**}	24	55^{**}
Tobacco									51^{*}	32	37^{*}	34
Nausea									34	34	18	37^{*}
Acne									25	28	-05	38^{*}

[a] The decimals have been omitted from the Pearson product-moment correlations.

* $p \leq .05$, two-tailed

** $p \leq .01$, two-tailed

For purposes of comparison of different configurations of the Avoidance of Joy Scale, Table 4.17 includes entries of all statistically significant correlations for each configuration (i.e., the 40 item version, the 20 item version, the 20 approach items taken separately, and the 20 avoidance items taken separately) of the Avoidance of Joy Scale. Thus, in addition to examination of direct relationships between life event stimuli and scores on the Avoidance of Joy Scale, a comparison of different yield rates of the different configurations of the Avoidance of Joy Scale is made possible. Firstly, in terms of examining direct relationships, fourteen stimuli would be expected to yield correlations that were statistically significant by chance ($\propto = .05$) for each configuration of the Avoidance of Joy Scale (269 stimuli x .05) in each of the three Standardization Samples.Thus across all three samples, approximately 40 statistically significant correlations would be expected by chance alone. For the purposes of this research investigation, concentration is focused on only the correlations with respect to the 40 item version of the Avoidance of Joy Scale which are examined in closer detail for three reasons: 1) as this research is exploratory, only the most reliable measure of avoidance of joy is considered (which is the 40 item version of the Avoidance of Joy Scale; 2) the 40 item configuration contains the three other configurations of avoidance of joy scale items, and thus reflects the variances contained in these configurations; and 3) for simplicity of exposition.

Specifically, then, the yield rate for the 40 item version of the Avoidance of Joy Scale was 32 statistically significant correlations across the 269 stimuli with respect to the Standardization I Sample, 35 for the Standardization II Sample, and

12 for the Standardization IV Sample. A total of 77 statistically significant correlations were produced which is nearly double that expected by chance ($\alpha = .05$). Only one stimulus yielded a statistically significant correlation that was in the negative direction. The direction of the correlation with respect to this stimulus ("Receiving an expensive present from someone you don't want to be involved with") is consistent with the theory of ontologic joy, that avoiders of joy (high score on the Avoidance of Joy Scale) are more opportunistic and would expectantly be less strained by such an occurance as receiving an expensive present under such circumstances. This interpretation is based on the tenet in the theory of ontologic joy regarding the expectation of reward described throughout the text of this investigation. Notwithstanding, the negative correlation is perhaps a chance occurrence as it was not replicated in either of the cross-referent samples (Standardization II and Standardization IV). All statistically significant correlations that are either negative or positive in direction throughout this particular analysis are consistent with the theory of ontologic joy. Although the theory of ontologic joy predicts that avoidance of ontologic joy would be positively related to strain, no data previously existed to confirm that such was the case. These results thus support the formulations of validity regarding the Avoidance of Joy Scale.

A second important finding with respect to the results reported in Table 4.17 concerns the different yield rates with respect to the separation of approach and avoidance items. Herein, only 17 stimuli yielded correlations that were statistically significant with respect to the 20 approach items. This number is less than half that expected by chance ($\alpha = .05$). In contrast, 78 stimuli yielded correlations that were statistically significant with respect to the 20 avoidance items. This number is nearly double that expected by chance, which lends support to the construct validity of the Avoidance of Joy Scale described earlier in the results pertaining to a two-factor interpretation of the Avoidance of Joy Scale. Secondly, the different yield rates between the 20 approach and the 20 avoidance items supports the idea of diagnostic utility in differentiating between approach and avoidance factors regarding the phenomenon of joy. Although more work needs to be done in delineating the mechanism of approach versus avoidance tendencies with respect to the phenomenon of joy, the findings regarding such differentiation are particularly consistent throughout the scope of studies undertaken in this research investigation. At this point in the evaluation of the total research evidence regarding the differentiation between approach and avoidance tendencies, it is apparent that saying yes or no to avoiding activities and other aspects of the phenomenon of joy, is distinctively different from saying yes or no to approaching joy. Perhaps people are more decisive about staying away from something than they are about getting further involved, and this may apply to all or perhaps most avoidance versus approach tendencies irrespective of content domain. Such delineation, however, awaits further research.

4.6.2 Drugs and Substance Use

The complexity of the phenomenon of alcohol, drug and substance abuse underscores that no single concept is apt to account for all the variability within this phenomenon. From the point of view of the theory of ontologic joy, the use of drug and other substances of abuse is considered deleterious to higher-order development of character. As an individual proceeds from lower-order levels to higher, a corresponding shift is anticipated in the direction of joy from pleasure to joy from goodness. In order to assess this predicted relationship through the technique of the correlation coefficient, it is necessary to have data across the range of levels of development. Such data was not available. However, data on use of various drugs and substances was available. Because little data regarding joy in general and substance use exists, the analyses were considered worth doing for observational reasons. Table 4.18 presents the results of the analysis pertaining to substance use.

Of the 36 substance variables considered, statistically significant correlations were obtained on 17 of them. Only two variables (use of alcohol and use of sleep medication) produced correlation coefficients that were statistically significant in all three Standardization I, II, and IV Samples. Low scores on the Avoidance of Joy Scale were found to be associated with higher use indices of alcohol, tobacco, caffeinated tea, marijuana, hashish, cocaine, codeine, and antihistamines as well as junk food. In contrast, high scores were associated with more use of amphetamines, sleep medication, tranquilizers, PCP (angel dust), aspirin and nasal decongestants as well as mineral supplements.

Although not examined in detail here, Table 4.19 provides a list of the drug and substance variables where a correlational difference of r = .10 (or greater) arose between approach versus avoidance items (pertaining to only those analyses where statistically significant correlations appeared between a substance variable and scores on the Avoidance of Joy Scale). With respect to the 36 variables considered, eight

Table 4.18

Summary Correlations[a] for Drug and Other Substance Variables

	Standardization I				Standardization II				Standardization IV			
Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Alcohol	-285**	-294**	-264**	-234**	-307**	-220**	-177	-311**	-306	-316	-085	-386*
Tobacco	-149*	-161*	-181*	-089								
Tea (caffeinated)	-120	-145*	-122	-090								
Junk food	-115	-114	-039	-147*								
Amphetamines	243*	202**	124	278**								
Sleep medication	177*	161*	152*	154*	145	267*	073	154	324	349	130	377*
Marijuana					-257*	-255*	-122	-276**				
Hashish	-141*	-157*	-095	-143*								
Tranquilizers					093	247*	153	031				
PCP (Angel dust)					242*	201	241*	180				
Cocaine	-127	-129	-052	-155*								

Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
Aspirin					121	241*	071	122				
Codeine					-234*	-241*	-119	-245*				
Pain killers					-224*	-093	-126	-224*				
Antihistamine	-145*	-131*	-058	-177*								
Mineral Supplements									384*	288	41	457**
Antibiotics					127*	174	105	109				
Nasal decongestants	145*	170*	136	119								

[a] The decimals have been omitted from the Pearson product moment correlations.

Response choices: 1) never, 2) once every five years, 3) about once a year, 4) a few times a year, 5) monthly, 6) twice a month, 7) weekly, 8) every couple of days, 9) once a day, 10) several times a day.

* p ≤ .05, two-tailed

** p ≤ .01, two-tailed

Table 4.19

Difference in Correlations Between Approach versus Avoidance of Joy (40 Items) Scores

	Standardization I	Standardization II	Standardization IV
	Approach-Avoidance Difference	Approach-Avoidance Difference	Approach-Avoidance Difference
Alchohol	030	134	301
Tobacco	092		
Tea (caffeinated)	032		
Junk Food	108		
Amphetamines	154		
Sleep medication	002	081	247
Marijuana		154	
Hashish	048		
Tranquilizers		122	
PCP (Angel Dust)		061	
Cocaine	103		

	Approach-Avoidance Difference	Approach-Avoidance Difference	Approach-Avoidance Difference
Aspirin		051	
Codeine		126	
Pain killers		081	
Antihistamine	119		
Mineral supplements			316
Nasal Decongestants	017	—	142
Average Difference	071	101	251

Overall average difference: r = .115

[a] The decimals have been omitted from the Pearson product-moment correlations.

[b] The differences in correlation coefficients were calculated between the correlation obtained for drug item variable with the avoidance of joy score from the respective correlation obtained for the drug item variable with the avoidance of joy score (or vice versa depending on magnitude). All correlation differences are absolute as to direction. Differences were calculated only for variables wherein a statistical difference appeared for the drug variable in at least one of the four correlations obtained within the Standardization Sample considered.

such differences appeared for the Standardization I Sample, 11 such differences within the Standardization II Sample, and four within the Standardization IV Sample. This represents about one-quarter of the analyses and thus supports the use of differential assessment based on the differentiation of approach and avoidance items.

4.6.3 Social and Health-Related Variables

Data on a variety of social and health-related variables were available for comparison to Avoidance of Joy Scale scores. These variables involve social impact, cost to society, as well as suffering to both persons and others (for example in the case of automobile accidents). Table 4.20 provides a summary of the correlational analyses performed. Indicated therein is that for the Standardization I, Standardization II, and Standardization IV Samples, no variable yielded statistically significant correlations in all three Samples. In total, 20 of the 69 analyses (i.e., 23 variables x three Standardization Samples) yielded statistically significant correlations. The direction of the findings indicated that high scores on the Avoidance of Joy Scale were associated with less missed work, less use of the dentist, less use of hospital emergency departments, and less use of medical specialists. On the other hand, high scores were positively associated with more major and minor surgeries, self-reported high blood pressure, more accidents as a passenger, more use of physiotherapist, more admissions to hospital, more individual problems requiring a physician, more calls to physicians at home, and more incidents of toothache, colds, and the flu. As well, high scores were also associated with self-ratings of poor health.

Taken as a whole, these results indicate that high scores on the Avoidance of Joy Scale were associated with poorer health and thus more demands on the health care system. The demands on the health care system appear to be related to more chronic types of difficulties. Further delineation, however, awaits a more detailed analysis of the data. As well, other research designs are required to trace out the patterns of social and health-related variables before any firm conclusions are warranted.

In keeping with the other findings in this research investigation the separation of approach versus avoidance items of the Avoidance of Joy Scale, the findings presented in Table 4.20 are again consistent with the findings reported earlier. Of the 18 correlations that are statistically significant, five are anchored to approach items, eleven to avoidance items, and two are tied on one variable. This difference supports the postulate (articulated throughout the results of the research investigation) that a two-factor interpretation of the approach-avoidance of joy is warranted. This two-factor interpretation supports the arguments favorable to both the validity and viability of the construct of ontologic joy.

In summary, the results presented in Chapter IV of the data analyses (obtained on four samples of research participants) provide strong support for both reliability and validity of the measuring instrument constructed, which was the major objective of this investigation. Alpha coefficients (which are generally accepted as lower-bound indicators of the internal consistency of a scale: DeVellis, 1991; Feldt

Table 4.20

Summary Correlations[a] for Various Social and Health-Related Variables

	Standardization I				Standardization II				Standardization IV			
Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
How often do you:[b]												
1. Miss work					-24*	-17	-07	-28*				
2. Visit a physician												
3. Use a dentist									-37*	-44*	-43*	-25
4. Use the emergency ward of a hospital	-17*	-18*	-13	-17*								
5. Call a physician at home regarding a medical problem					16	22*	10	15				
6. Visit a chiropractor												
7. Use a physiotherapist									18	10	42*	-01
8. Go to a medical specialist	-11	-10	-03	-14*								

	Standardization I				Standardization II				Standardization IV			
Source	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
9. Have a cold									22	13	-08	36^{*}
10. Have a headache												
11. Get the flu	17^{*}	17^{*}	06	21^{**}					31	25	06	40^{*}
12. Get a toothache									46^{**}	46^{**}	30	46^{**}
13. Have a medical problem requiring a physician									21	14	-18	42^{*}
14. Have aches and pains												
15[c]. How many automobile accidents have you been in where you were a passenger					27^{*}	24	27^{*}	21				
16[c]. How many automobile accidents have you been in where you were the driver												

Source	Standardization I				Standardization II				Standardization IV			
	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance	40 items	20 items	Approach	Avoidance
17[c]. How many times have you been in the hospital as a patient since the age of 16					31*	41**	20	30*	51*	54*	80**	24
18[d]. I would rate my medical health as:	-16*	-16*	-09	-18*	-19	-20	-05	-24*				
Do you have:[e]												
19. High blood pressure					-23*	-29**	-25*	-16				
20. Minor allergies												
21. Major allergies												
How many times have you had:[c]												
22. Minor surgery in the last 5 years					29*	50**	37**	14	56*	30	06	65*
23. Major surgery in the last 5 years	26*	23*	25*	21*								

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[a] The decimals have been omitted from the Pearson product-moment correlations.

[b] Response choices: 1) never, 2) once every five years, 3) about once a year, 4) a few times a year, 5) monthly, 6) twice a month, 7) weekly, 8) every couple of days, 9) once a day, 10) several times a day.

[c] Actual number given

[d] Response choices: 1) very poor, 2) not well, 3) fair, 4) good, 5) excellent

[e] Response choices: 1) yes, 2) no

[*] $p \leq .05$, two-tailed

[**] $p \leq .01$, two-tailed

& Brennan, 1989) are satisfactorily high for this type of personality scale of comparable length and of binary format. Alpha coefficients calculated on the final forms of the Avoidance of Joy Scale for the Standardization I Sample (the initial sample in the scale development process) are most respectable (α = .89, 40 items; α = .83, 20 items). Little shrinkage in the level of coefficients was observed in the split-sample (Standardization II) despite the significant reduction in sample variability, while some elevation occurred in the level of coefficients in a cross-referent sample (Standardization IV). Considerable support for the content, criterion-related (concurrent and predictive) as well as construct validity of the Avoidance of Joy Scale was demonstrated.

CHAPTER V

DISCUSSION

5.1 Introduction

The review of the research literature revealed that the phenomenon of joy has received little study experimentally despite the popularity of the topic in depictions of human activity. Closer examination of the research literature revealed the need for theory, for tools of evaluation, and for data-based research as priority issues. This research investigation has contributed to each of these three areas. From a methodological stand point, this research has provided support for the theory of ontologic joy; which, although specific in focus, fulfills part of the need for theory within the total literature on the phenomenon of joy which is presently, almost void of theory in general. As part of the study of the latent variable (or construct) of ontologic joy, the research has also yielded a measuring instrument in the form of the Avoidance of Joy Scale as a tool of evaluation. The data pertaining to the reliability and validity of the measuring instrument, as well as the latent variable or construct of ontologic joy on which it was premised, are germane to the further understanding of the phenomenon of joy in general. Similarly, the data pertaining to exploring the relationship between avoidance-approach of joy and strain, to a wide array of stress variables, to substance use, as well as to social-health related variables have provided some promising leads for future research.

5.2 General Statement of Findings

The primary aim of this research investigation was the construction of an Avoidance of Joy Scale to assist the assessment of the relationships between avoidance-approach of joy and various other variables believed to bear a conceptual link to ontologic joy. For the purposes of this investigation, the construct of ontologic joy was defined as the avoidance and approach tendency toward the phenomenon of joy without rewards, wherein the idea of joy evoked from goodness was also retained within its linguistic definition. This construct, or latent variable when viewed within the classical measurement model was held to be causal (i.e., the latent variable is causal of a higher or lower score on the Avoidance of Joy Scale: see DeVellis, 1991 for a discussion of causality and the latent variable). Manifestation of this construct or latent variable is thus held to be operationally contained within the measuring instrument. Methodologically, the task involved demonstrating the feasibility of constructing a suitable measuring instrument of the concept of ontologic joy, demonstrating that the scale reflected the latent variable or construct of interest, showing that the Avoidance of Joy Scale represented something meaningful to others familiar with the latent variable of ontologic joy, and illustrating that the score on this measuring instrument identifies something different from the usual perspective on joy and its relationship to other human related phenomena and activity.

An important feature of this investigation was the finding that the chosen methodology (i.e., the randomly parallel tests variation of the classical measurement model: DeVellis, 1991; Feldt & Brennan, 1989) was feasible for the construction of the Avoidance of Joy Scale. The results of the investigation indicate that a wide variety of thoughts, attitudes, beliefs, feelings, and behaviors regarding the phenomenon of joy can be scaled along an avoidance-approach continuum. Respectable psychometric properties of reliability and validity were demonstrated for the scale. As such, the extension of this research methodology to other areas of philosophical thought about the phenomenon of joy appears appropriate and further use of the Avoidance of Joy Scale as a research instrument is warranted.

A second aspect of the findings of this research investigation, pertaining to the successful demonstration of construction of the Avoidance of Joy Scale, concerns the future research possibilities about the general theory of positive disintegration as well as the particular construct of ontologic joy. The results of the investigation confirm several postulates of the construct of ontologic joy, and various leads to future research look promising.

Thirdly, in this investigation the construct under study was ontologic joy, which draws its basic postulates from the more general theory of positive disintegration (Dabrowski, 1964, 1967, 1970, 1992). Because the data utilized in the study were extant, the construct of ontologic joy was applied without option of manipulation of the content of items. Thus the demands required of the theory of ontologic joy were particularly rigorous. Failure at any step of the investigation would thereby render the application unsuccessful. The application, serves as a particularly stringent test of the construct validity of both the general and specific theories of positive disintegration and ontologic joy, respectively.

Notwithstanding that the salient findings in this investigation are supportive of the classical model of measurement, the results also give rise to several questions of efficacy regarding the type of measurement that is founded in central tendencies of a distribution. Within the randomly parallel test variation of the classical model of measurement adopted for this research investigation, for example, items with extreme endorsements were culled from the scale construction process. Despite their low efficiency, it is probably the case that these kinds of items could provide considerable insight into the nuances of individual functioning.

Fifthly, no research study can provide answers to all questions immediately. Although all four hypotheses were confirmed at a strong level of statistical significance, several limitations of the research exist. Results were particularly consistent with expectations regarding the construct of ontologic joy, thus warranting further research. The salient aspects of these issues are discussed in greater detail in the sections following.

5.3 Major Findings

The major objective of this research investigation involved the construction of a scale to measure the avoidance-approach of joy. Summarily this objective was achieved. Consideration of the resultant psychometric properties of the Avoidance of Joy Scale are detailed below.

5.3.1 Characteristics of the Avoidance of Joy Scale

As noted above, the results of this investigation demonstrate that a wide variety of thoughts, attitudes, beliefs, feelings, and behaviors regarding the phenomenon of joy can be scaled within two factors, i.e., avoidance and approach dimensions. Clear definition of both the 40 and 20 item versions of the Avoidance of Joy Scale was possible using a two-factor interpretation of the item correlation matrix. All 20 avoidance items (Factor I) were distinctly separated from the 20 approach items (Factor II) when rotated to a Varimax solution. Separate Procrustes Analysis based on 4,999,999 permutations of the hypothesis matrix confirmed this hypothesized factor structure at $p = .0000002$ levels for both versions of the Avoidance of Joy Scale. The Index of Factor Fit, Congruency coefficients, and Frobenius index of general fit were all at about the .90 level.

Based on the consistently high Cronbach alpha coefficients, the theta coefficients, and the split-half (odd-even) reliability coefficients across three samples of research participants, the evidence for high homogeneity of both versions of the scale is strong. Test-retest reliability coefficients are good, as is the evidence for two factors of avoidance and approach of joy. Overlap with stylistic response variances appears to be minimal.

The validity properties of the Avoidance of Joy Scale also appear very strong. Scale content is broad in scope, and the concurrent validity indicators in terms of joy-related behaviors were consistent and statistically significant. The relationships found with various criterion-related variables were consistently in the direction predicted by the theory of ontologic joy. Convergent item - validity was strong and the discriminant validity of the scale appears sharp and consistent as well. Validity findings in relation to critical elements in the construct of ontologic joy (e.g., elements of no reward, goodness in character, and empathy in feelings) were firmly supported, as was the discriminant validity in terms of extrinsic variables pertinent to the construct (e.g., neuroticism and psychoticism). The factorial separation of approach and avoidance items was not only distinctly demonstrated in terms of the internal structure of the Avoidance of Joy Scale, but considerable differentiation between the two subscales was evident in terms of relationships to a variety of external variables.

Exploratory research findings were also consistent with expectations derived from the theory of ontologic joy. Strain associated with a variety of life events, things, and perceptions were all in the expected direction wherever statistically significant correlations appeared. High scores on the Avoidance of Joy Scale were associated with poorer health and more demands on the health care system as were the use of several medications. Although low scores tend to be associated with the use of soft drugs (e.g., marijuana, hashish), as well as tobacco and alcohol, these substances are generally held to be stimulating. Though the necessary data was not available to test this latter finding, the theory of ontologic joy predicts that substance use is apt to occur at the lower levels of development. In as much as other research by Dabrowski (1964, 1967, 1970) found that most people in society are at a Level II - Level III stage of development, it is plausible that the use of substances such as soft drugs, tobacco, and alcohol for instance, are simply a reflection of that level of development.

5.3.2 The Issue of Subscales

Throughout this investigation the importance of obtaining an accurate estimate of the "true variance" (presumably the reliability of the measure: DeVellis, 1991; Feldt & Brennan, 1989) has been underscored. A review of the literature on measurement theory reveals that extensive difficulty in meeting the numerous theoretical criteria for reliability and validity is usually encountered in practice. Moreover, augmentation of one psychometric property sometimes decreases the level of another psychometric property, which is also an important issue in its own right (DeVellis, 1991). In response to this circumstance (generally perceived as exasperating, if not also as incompatible criteria) Anastasi (1988), among others, have argued in favour of subtest scales. Thus internal consistency can be preserved within a particular subtest. In practice, such subscales are often embedded, however, with the same conceptual problems and difficulties in measurement as exist for measurement of large abstract concepts. The paradigm of examining a phenomenon through the subtest procedure is predicated on the assumption that individual subtests tap relevant dimensions of the phenomenon of interest. Clearly, the legacy of the Wechsler type of approach to intelligence demonstrates a merit of this approach, as does the history of positive manifold among tests of intelligence traversing Spearman's (1904, 1927) early demonstrations of a general factor (g) to other factor analytic approaches (Cohen, 1957a, 1957b; Kaufmann, 1975). The counter-argument to this paradigm of subtests, is that this state-of-the-affairs reflects an existing weakness and deficiency in methodology and understanding. Debate as to merit of which paradigm to follow remains germane and current. As the vagaries of the issues are replete in the literature, this investigation does not review them here, as the purposes of this investigation is restricted to the specific concept of ontologic joy rather than the phenomenon of joy in general. Were the task of this investigation to study the measurement of the phenomenon of joy in its broadest context, perhaps the paradigm of subtests may be the most appropriate, considering the level of methodological technique available at the present level of understanding of measurement of highly abstract phenomena is rather soft. However, because the concept of ontological joy has already been defined in more specific terms within the general phenomenon of joy, the focus of the investigation concentrates on scope of content within the specificity of ontologic joy. Notwithstanding the above-noted distinction, the necessity for accuracy of measurement remains the same for measurement in a specific area of joy as it does at the more general level.

The major advantage to a model of measurement involving subscales occurs where measurement poses difficulties in assessing true variation of an abstract phenomenon. This circumstance may arise because of the complexity of the latent variable of interest. On the other hand, such low yields may simply by the result of weak methodology in the first instance, or weak application of reasonable methodological principles. With respect to the Avoidance of Joy Scale, two subscales (one comprised of approach items, and the second comprised of avoidance items) were defined factorically. This is to note that the idea of a subscale model may sometimes be a natural representation of the construct under study. Failure to produce precision in measurement however, does not in itself justify the model of subscales as put forward by Anastasi (1988) among others.

5.3.3 Validity of the Supporting Theory

In as much as the basic tenets of the theory of ontologic joy are founded in the postulates of the theory of positive disintegration, the successful demonstration of scale construction adds confirmatory support to positive disintegration theory in terms of both its general and specific construct validity. Further, the fact that the theory of positive disintegration in its general form, as well as the more specific focus in terms of the theory of ontologic joy were successfully applied underscores the viability of the positive disintegration perspective. Because an application of a theory is a more stringent test of a theory than where research is shaped to maximize the potential for uncovering positive results, the findings of this investigation serve as confirmatory evidence of the validity of the theory of positive disintegration. In addition, the results of this investigation also provide confirmatory support for the classical tragic perspective within classical literature as articulated by Aristotle, Goethe, Shakespeare and Nietzsche (Kaufmann,1960) in so far as the general theory of positive disintegration and the particular theory of ontologic joy is consistent with that philosophy of life.

Especially relevant to the different focus of the classical tragic model in literary thought, as compared to fulfillment (such as existentialism) or appeasement (such as Christianity), is the perspective taken on the purpose in being alive in the first instance. Central to the literature on ontology is the mode of being, or simply "what does it mean to live a life?" In its more abstract underpinnings the question is one of understanding the purpose of action, which with respect to causality has been framed by Rychlak (1968, 1977) as "that for the sake of which." Answers to this question of "for what purpose" have been proffered historically from an expanse of perspectives ranging from the supernatural to the vagaries of political systems and various themes around which communities are organized. Much of these described ideologies can be condensed into three purposes centred on the ideas of (a) being-in-the world; (b) being for oneself; and (c) being-for-others (see Keen, 1970 for a discussion of these three modes of action). This investigation examines a fourth mode of action, namely the ontological idea of being-for-an-abstract-purpose. With respect to this fourth issue, this investigation was restricted to the concept of ontologic joy and the construction of a measuring instrument suitable for use in empirical exploration of the implications of adopting a more abstract mode of action (i.e., being-for-an-abstract-purpose) than is typically conceived in simply being alive, or living for oneself or for others. The three dimensions of being articulated by Keen (1970) are relevant to the idea of being-for-an-abstract-purpose at the more basic fundamental levels of existence. The position adopted in this investigation with respect to the construct of ontologic joy is that such joy evolves at a higher order of value. This higher-order is consistent with the higher levels of development articulated extensively in the theory of positive disintegration (Dabrowski, 1964, 1967, 1992) as well as in the literary tradition of the classic model of tragedy as articulated by Aristotle, Goethe, Nietzsche and Shakespeare (Kaufmann, 1960) among others. While both the literary and philosophical literature have a lengthy history of thought and a corresponding voluminous literature, little experimental research exists in the area. A major feature of this investigation is the application of modern measurement theory to the concept of ontologic joy. In other words, although the concept of ontologic joy embodies considerable abstraction, the idea of its measurement nonetheless, is taken seriously.

5.4 Specific Findings

Ultimately, all research investigations must be adjudicated against the evaluative criteria set out by science as a whole (cf. Rychlak, 1968, 1977). Because research investigations focused on the measurement of abstract phenomenon traverse a wide spectrum of methodological issues ranging from the adequacy of theory (cf. Jackson, 1971) to the adequacy of the research design employed (cf. Campbell & Stanley, 1966; Cook & Campbell, 1979), such research investigations interface with the plethora of theoretical and methodological issues immediately. From an empirical point of view, a variety of issues remain unresolved in each of the topical domains investigated in this research project. However, several advances have been made in the direction of further understanding of the phenomenon of joy in general, in approach-avoidance tendencies to the phenomenon of joy, and in the specific features of the construct of ontologic joy.

The specific findings of this study pertain to the following five issues: 1) concerns regarding methodology within the research literature; 2) inadequacy of the existing research literature; 3) resolving ambiguity in the conceptions regarding other topic domains perceived as bearing impact in everyday human functioning; 4) general theoretical problems of research involving measurement based on the classical model; and 5) considerations regarding the efficacy of measurement in general.

5.4.1 Methodological Issues

Regarding the research literature on the phenomenon of joy, this research investigation has added clarity to the following methodological issues:

5.4.1.1. Definition of joy. As noted earlier in Chapter II, the research literature contained little by way of a common definition of the phenomenon of joy. Use of the term joy generally pertained to the idea of "happiness" and "pleasure," with little reference to the concept of goodness which is also contained within its linguistic conception (cf. Funk & Wagnalls, 1989; Random House, 1980; Webster, 1992). A major focus of this research study was the investigation of the theory of ontologic joy, which was formulated to include not only the ideas of pleasure and happiness, but the idea of goodness as well. The correlation analyses, as well as the set of Oneway Analyses of Variances and the corresponding Aposterori tests provided firm evidence of the construct validity of the intrinsic components of the theory: a) the no-reward element, b) character related to goodness, and c) empathic concern. Because this research represents the first quasi-experimental study of the phenomenon of joy wherein the idea of goodness was specifically included in the conception of the latent variable (or construct) under study, no previous research literature exists which bears directly on the findings. At the more macrolevel of consideration, however, the findings bear directly on the parent theory of positive disintegration (Dabrowski, 1964, 1967, 1970, 1992; Dabrowski & Dabrowski, 1974; Dabrowski, Kawczak, & Sochanska, 1973) and were consistent and supportive of that perspective. Similarly, the findings of this research investigation lend support to the viability of the classical tragic view of human existence as articulated by Aristotle, Goethe, Shakespeare, and Nietzsche (cf. Kaufmann, 1960).

One consequence of the findings regarding the validity of the construct of ontologic joy concerns the interpretation of the research literature in terms of understanding the relevance of the emotion of joy. Re-examination of the place of the emotion of joy in the historical literature -- i.e., as a primary emotion (Wallerstein, 1964), as a biologically based coarse emotion (Scheff, 1985), as a fundamental emotion (Manstead & Tetlock, 1989; Sogon & Masutani, 1989) -- is warranted. Research on joy as a universal emotion in experience (e.g., Matsumoto, Kudoh, Scherer, & Wallbott, 1988; Wallbott & Scherer, 1988) is decidedly different when interpreted without the idea of goodness in a conception of the phenomenon of joy, than when the phenomenon of joy is interpreted within the meaning of joy wherein the idea of goodness exists. Studies on the distinctions among emotions (e.g., Shaver, Schwartz, Kirson, & O'Connor, 1987) are affected as to the meaning of the distinction as well. It seems appropriate as well, to rethink through the entire literature on the phenomenon of joy from the basic understanding of joy in the taxonomy of emotions (Leichner, 1988), to the meaning of findings at the basic level of naming emotions in general (Fehr & Russell, 1984), as well as the early thought processes of children (Bretherton & Beeghly, 1982) regarding joy.

5.4.1.4. Retrospective bias. Eysenck (1988) as well as Schroeder and Costa (1984) have echoed concerns about the contaminating effects of retrospective bias in data obtained through self-reports. Evidence for response bias related to joy has been reported in schizophrenics (Dougherty, Barlett, & Izard, 1974), for a mood adjective check list under a "joy" instructional set (Meadows, 1975), and in preference among infants for facial expressions of joy (LaBarbera, Izard, Vietz, & Parisi, 1976). Although the matter of retrospective bias was not examined experimentally in this research investigation, little overlap was found between standard measures of response bias and the Avoidance of Joy Scale. That there may be a distinct structure to joy has been suggested by deRivera, Possell, Verette, and Weiner (1989); which, if so, may mitigate against intrusion of response biases. The finding, however, that the provisional items used in the construction of the measuring instrument display different levels of saturation with selected response bias measures argues against such an immunity regarding joy. Further work delineating the degree of susceptibility to response biases in general, as well as retrospective bias in particular is necessary.

5.4.1.3. Other aspects. In light of the fact that much of the literature in human functioning has focused on the negative consequences of both human lifestyles and individual life scripts, questions arise about the consequences and dynamics of human experiences and perceptions regarded as positive. It still remains unknown, in the main, whether positive and negative components of human experience represent bipolar aspects of a singular dimension, or whether both are separate phenomena. As well, the mechanism(s) explaining how both positive and negative consequences arise from the same event of joy remains undiscovered. The assumed merits of joy replete throughout the research literature also remain without supporting data. Similarly, data are clearly needed to resolve the inconsistency of previous research findings noted in manipulation experiments of positive and negative consequences (Martin, Buckholt, Pipes, Nivens, & Katz, 1987), conflicting views regarding positive and negative experiences (Weinberger, Darnell, Marz, Hiner, Neill, & Tierney, 1986), and the relationship between positive experiences and human difficulties (Cohen, McGowan, Fooskas, & Rose, 1984; Sarason, Sarason, Potter, & Antoni, 1985; Zautra & Reich, 1981; Zimmerman, 1983a).

The findings of this research investigation do not resolve these particular issues. Nonetheless, the results of the investigation provide some indication of direction for furthering our understanding of the dynamics of the emotion of joy. In that the theory of ontologic joy addresses the relevance of values, it is possible that a clearer conception of cultural differences is possible as illustrated in the works of Gilgen and Cho (1979), Nagata (1978), Scherer, Summerfield, and Wallbott (1984), as well as Steinkamp and Habteyes (1985). Such bridging has already been suggested by Weckowicz (1988) through the general theory of positive disintegration (Dabrowski, 1964, 1967). Use of the intellect to characterize the circumstances of emotions (James, 1952), the appraisal of an emotion (Arnold, 1970), and judging its reinforcement potency (Rychlak, 1977) are consistent with the premise that a person can act on the basis of an abstract purpose. A defensible case can be made for the study of an emotion in terms that are holistic and integrated with the full spectrum of human motivation as beckoned by Kohlberg (1963), McLeod (1975), Pervin (1980), and Rychlak (1977), among others.

5.4.2 The Existing Research Literature

In as much as one of the purposes of the theory of ontologic joy, like any theory, is to guide new research, the interpretation of the exploratory research undertaken in this investigation warrants examination. Not only are these findings especially relevant to the explication of the theory of ontologic joy, but this new area of study reflects the necessity in research endeavours to delve into the unknown. Such study, thus imposes new test challenges to the validity at the construct of ontologic joy.

Within the context of such new challenges, the results of the findings regarding the relationships of ontologic joy to strain and substance use point to complexities and issues regarding measurement in general. Several issues of measurement are examined below within the context of 1) strain, 2) substance use, and 3) social and health-related variables, 4) psychotherapeutic aspects, and 5) the nature of avoidance versus approach as these phenomenon are predicted from the theory of ontologic joy.

5.4.2.1. Strain. In essence the theory of ontologic joy presumes that various life issues are sources of stimulation for character development. Thus, although the strain associated with various life events (or stresses) may become overwhelming, the idea is that perseverance can assist that development. Ultimately one does not rise above one's suffering, but rather one rises above oneself toward a higher-order value that is continuous across one's life span. Many individuals, however, lapse in this process, and either linger at a lower level of development or attempt to make appeasements with the forces found unpleasant or overwhelming. The conception of ontologic joy is hierarchical and is held to traverse from more simple satisfaction and pleasure derived from basic need satisfaction toward an ascending goal of joy evoked from goodness. Joy is thus not a reward of goodness but rather a consequence of it. The proverbial passage that "virtue is its own reward" captures the essence.

As individuals are at different levels and stages of development, it follows that the strains experienced do not only have a differential impact at different levels of development, but also are experienced not as materially different, but different as to context. Struggles in life exigencies may be revisited many times across a spectrum of contexts. In this view, the strain of life events, exigencies, perceptions, and experiences are revisited as embodied in the Nietzschean (1964) view of eternal recurrence. The spectrum of contexts, understood in the theory of positive disintegration as multilevelness, provides a continuing array of challenges for development. One can attempt to meet this challenge, or one can attempt to abate the external and internal forces that are often, perhaps usually, unsettling. Alternatively, one can choose to exit the challenge altogether, through regression to a lower-order of challenge or through appeal to external assistance such as supernatural forces, intellectual gymnastics, drugs, or immersion in a plethora of distracting activity.

Data based studies, however, that examine the relationship between the phenomenon of joy and stress are few. Thomas (1986) suggests that Type B (non-coronary prone) personalities experience less stress as a result of the frustrations of early life and are more likely to view life as a joy. Asthmatic children have been shown to show fewer expressions of emotion in a stress inducing condition (Florin, Freudenberg, & Hollaender (1985) as well as lower frequency and duration of expressed emotion (enjoyment/joy, anger/rage, and surprise/startle) in a stress inducing competitive achievement situation (Hollaender & Florin, 1983). The piecemeal nature of such research renders few, if any, conclusions about joy as a phenomenon, and even fewer about mechanisms that may be involved in stress (strain) in relation to joy. A handful of references (Davis, 1989; Leland, 1976; Kofodimos, 1990; Shapiro, 1986) include the phenomenon of joy together with stress without suggestion of a direct linkage between the two dimensions and are thus tangential to the findings of the present research investigation.

In contrast, the theory of ontologic joy subsumes the stresses of life and their accompanying strain, both positive and negative and whether intense or mild, as an essential ingredient in emotional development. The more intense and global the strain, the faster the developmental process unfolds. In the present research investigation, the scores on the Avoidance of Joy Scale were positively-related to higher levels of strain. Delineation of the dynamic(s) and mechanism(s) involved, however, await further study. At face value though, the findings are consistent with the theory of ontologic joy as well as the general theory of positive disintegration. Expectantly, those who avoid joy (high scores on the Avoidance of Joy Scale) would rate their personal strain level higher (when strain is considered less useful) than in the opposite condition (where strain is perceived as valuable to their personality development). Though this explanation evolves from the theory of ontologic joy, it is important to interpret these results in the context of the caveat that the interpretation is hypothetical. In other words, the available data is only face-value data rather than experimental data, and as such, the interpretation is speculative only.

5.4.2.2. Substance use. In general, the theory of ontological joy expects that the approach of joy reflects a perspective regarding the direction to one's lifescript that involves movement toward a hierarchical higher-order of development and value. Examination of Table 4.18 confirms the expectation that scores on the Avoidance of Joy Scale would be differentially related to the use of various drugs and other substances. This differentiality is consistent with the theory of ontologic joy, notably that ontologic joy is multilevel. In other words the principal of joy without rewards is more stringent at higher-order levels of character development. At lower-levels of development, the invocation of the principal is expectantly more rudimentary. Whereas joy without rewards, for example, is more like an inclination, a tendency, a mere passing fancy at lower-order levels, at higher-order levels of character development, the tendency has solidified such that it presides as a criterion in decision making. Population samples would not be sufficiently diverse to fully capture this distinction within the context of a general correlational coefficient involving ordinary human activities and practices. This is not to deprecate the value of a precise measure of avoidance of joy. What however, is underscored is that the application of such a measuring instrument is apt to be more suitable at one level, or within a specified range of a different dimension than it would be at another. This view is analogous to the conception of intelligence, for example, and its measurement. The idea of a hierarchical continuum of ontologic joy is part of the definition of what ontologic joy is conceived to be in its definitional sense. At this point in the study of the construct of ontologic joy, this research investigation has focused on the construction of a scale to measure the avoidance of joy. However, this research investigation did not intend that such a measure of avoidance of joy be an instrument that meets all the needs for measurement within the topic domain. Rather it is intended that the construction of the Avoidance of Joy Scale is only one piece of the tools and techniques required to evaluate the theory of ontologic joy. Thus the Avoidance of Joy Scale must meet the criteria of the class of tools to which it belongs.

Little research literature exists in this topical area, and what does exist is almost exclusively non-experimental. Two studies were located wherein some semblance of experimental-quasiexperimental design was employed. However, both studies offer very limited inferences and both remain unreplicated. An appearance of a relationship between the dopaminergic system and positive emotions has been suggested by Castrogiovanni, Fornaro, and Neglia (1985). The extent to which scores on the Avoidance of Joy Scale reflect the level of occurrence of joy in unknown. In the present investigation, high scores on the Avoidance of Joy Scale were found to be associated with less use of alcohol, tobacco, marijuana, hashish, cocaine, codeine and antihistamines as well as more use of amphetamines, sleep medication, tranquillizers, PCP or angel dust, aspirin and nasal decongestants. As such, drawing conclusions about these findings in terms of the dopeminergic system is decidedly premature, as is the drawing of any conclusions regarding the Janal, Colt, Clark, and Glusman (1984) finding that Naloxone attenuated the elevation in joy and euphoria ratings.

5.4.2.3. Social and health-related variables. Human activities that impact the social community or affect the personal well-being of its members obviously are of interest. The findings of this study in this particular area support the view that high scores on the Avoidance of Joy Scale are associated with poorer health and more demands being placed on the health care system for medical services. The question that immediately arises is whether such indicated relationships are causal, associative, or only artifactual? The necessary data required to delineate these linkages is not yet available and thus the issue awaits further study.

Notwithstanding that such linkages may be either, both, or reflective of third or other factors, the possibility also exists that the preliminary indication of correspondence may only be artifactual, and even causally reversed. For example, it may simply be the case that scores on the Avoidance of Joy Scale reflect an artifact of measurement. An analogous illustration, for instance, arises in blood pressure differences that are endogenous to gender. While it was unknown at one time that females typically have lower systolic and diastolic levels of pressure than their male counterparts, causal linkages to blood pressure were often readily assumed (whereas in fact, the variance in the data could be totally attributable in certain studies to artifact as a consequence of unequal gender sampling). In other words, if a variable that is intricately related to blood pressure is examined in relationship to another variable within a subsample of females, and these two variables are compared to a subsample of males in a between-groups design, the statistically difference is frequently mistakenly inferred to be due to the relationship between the two variables. While gender is usually taken into account in modern research practices, such taking into account has only evolved from knowledge of the relationship between gender and a particular variable. Where artifactual relationships are embedded in data, and the knowledge of the existence or at least possibility of such artifactual correspondence remains unknown, little control can be exercised in advance. Protection against faulty inference though can be practised through caution.

A second line of caution concerns the possibility of reverse causality. Again it may simply be the case that individuals in poorer health experience less joy as a result of their poor health rather than as a cause of their poorer health. Too little is known about the characteristics of the research samples, which coupled to the numerous sources of invalidity, renders any firm conclusion as hazardous.

In a sense, the above discussion may appear to some to be internally contradictory. For example, the question can be proffered as to the meaning of a measurement (presumably the construct of ontologic joy) in the context of an activity such as substance use wherein opposing positive and negative evidences appear. Simply, what is pointed up here is that the issue of validity of a measuring instrument is a multifaceted and complex matter (Messick, 1989). Contradictory findings must be taken seriously, however, the nature of the contradiction may be only appearance and not material. There are several points in addition to those articulated above that are germane to the findings with respect to the Avoidance of Existential Confrontation Scale in illustrating this line of reasoning as well.

All of the handful of research studies located in the research literature that were quasi-experimental in nature (Krawczyk, 1973; Schneidman, 1989; Thomas, 1986) have reported positive emotions as associated with good health. That joy is a relevant dimension positive to health has been further indicated by a consensus of authors (Brandler, 1985; Brownell, 1981; Duhl, 1986; Glidewell, 1987; Kiveley, 1988; Kuypers, 1977; Mach & Gorsuch, 1986; Regin, 1983; Zlovenko, 1984). The findings in this research investigation that high scores on the Avoidance of Joy Scale were associated with self-reported indices of poorer health and more demands on the health care system, are to some extent, consistent with previous research findings. The findings, however, were not exclusively in the above-noted direction. For example, high scores on the Avoidance of Joy Scale were associated with less missed work, less use of dentists, or medical specialists, and less use of hospital emergency departments. The number of studies, however, are too few to draw any firm conclusions. As well, the construct of avoidance of joy represents a different conception than the amount of experiences of joy. As such, the data of the present research investigation represents an initial indication of relationship between health-related variables and the concept of avoidance of joy only, rather than the occurrence of joy per se.

5.4.2.4. Psychotherapeutic aspects. Although various references exist in the research literature that relate the phenomenon of joy to psychiatric and psychotherapeutic topics, none of these references are either experimental or quasi-experimental in design. Virtually all the existing references, however, consider joy as either a goal in psychotherapy (Chessick, 1987; David, 1989; Enke, 1989;

Saltzman, 1981; Vincent, 1987), or as an adjunct of studying therapeutic climates (Brandler, 1985; Kuypers, 1977; Mach & Gorsuch, 1986; Osgood, Meyers, & Orchowsky, 1990; Saul & Saul, 1990), or individual conditions (Cohen, 1989; Krawczyk, 1973; Trad, 1990). Some description papers exist; though these tend to be limited to single issues in psychosis (Cohen, 1989; Grotstein, 1970; Trad, 1990; Zaimov, 1982), and expository articles on neurotic processes (Gall, 1983; Grotstein, 1979; Santibanez & Bloch, 1986). Because of the piecemeal nature of the existing studies as well as the absence of data-based findings, it is clear that more extensive research is essential before any firm conclusion can be drawn. In light of this circumstance, the findings of the present research study regarding the indication of a positive relationship between scores on the Avoidance of Joy Scale and measures of neuroticism and psychoticism are considered only tangentially relevant to the psychotherapeutic literature regarding the phenomenon of joy. The findings, however, are consistent with the existential viewpoint regarding avoidance of the "givens" of existence (cf. Bugental, 1965; May, 1967; Tillich, 1952). Whereas these authors have concentrated on negative conditions of existence (e.g., death, meaninglessness, loneliness, guilt, and so forth), the results of the present investigation provide data-based findings that the phenomenon of neuroticism and psychoticism are related to avoidance of positive aspects of existence as well.

5.4.2.5. Avoidance-approach as a construct. DeVellis (1991) has articulated the view that avoidance-approach tendencies represent a distinct construct(s) in their own right, and this construct(s) is superordinate to most latent variables. In this research investigation, a two-factor solution (based on a distinct separation of avoidance from approach items) was indicated. Within this context it is appropriate to consider the dimensions of avoidance and approach in terms of construct-related issues.

Firstly, as noted earlier, the network of ontologic joy is conceived to be complex, diverse, and distributed across various measurement issues. Evaluation of the construct of ontologic joy, and the theory of ontologic joy from which the construct is derived, awaits the development of additional measuring instruments which can assess the level of character development in the research sample being evaluated. At present there is no appropriate instrument which provides an easily determined indication of such levels. Evaluation of the validity of the construct of ontologic joy is predicated on the determination of mutlilevelness of development (see Dabrowski, 1970 for a discussion of mutlilevelness within the context of measurement).

Although it is possible to critically evaluate the construct of ontologic joy in research contexts other than the use of additional measuring instruments, the data necessary for such validation studies is not available as yet. The idea put forth earlier by Cronbach (1971) that one does not evaluate the validity of a measuring instrument but rather "an interpretation of data arising from a specific procedure" (p.447), is especially germane. As Carmines and Zeller (1979) underscore, validation of the measuring instrument is engaged "in relation to the purpose for which it is being used" (p. 17). Thus a test may be "relatively valid for measuring one kind of phenomenon but entirely invalid for assessing other phenomena" (Carmines & Zeller, 1979, p. 17).

5.4.3 Human Functioning

5.4.3.1. Character development. The demonstration that the theory of ontologic joy has viability (in light of the reliability and validity evidence accumulated), provides firm support for further use of the theory, as well as the measuring instrument (The Avoidance of Joy Scale), to study the components and processes of higher-order development. Not only is such use germane to furthering the earlier work of others in studies of character development (Dabrowski, 1964, 1967; Freud, 1955; among others), but the psychometric properties of the instrument are sufficiently respectable to examine the virtually neglected issues from other disciplines. For example, though the general study of altruism (Barash, 1977; Brown, 1975; Trivers, 1971; Wilson, 1978) is progressing rapidly, work in the context of joy has been piecemeal (Rosenhan, Salovey, & Hargis, 1981; Smith, Keating, Stotland, 1989). Moreover, these piecemeal findings are somewhat contradictory to expectation derived from such conceptions as sympathetic joy in Buddhist philosophy (Kornfield, 1985), Van de kemp's (1990) idea of the soul as the capacity for imagining pain and joy, as well as Darwin's (1927, 1952) view that people propagate their own kind of personalities not through their physical children but through their ethical children. At face value, the findings of this research investigation support the view that the avoidance of joy, in general, is associated with less empathic responses at the attitudinal (self-reported) level. Considerably more research is required before any clear understanding of the role of joy and altruistic related behavior is discernible.

5.4.3.2. Higher-order development. In so far as emotional development is connected to character development (Dabrowski, 1992), the experience of joy is apt to play at best some functionary role. The finding of a relationship between scores on the Avoidance of Joy Scale and those on character-related variables is consistent with the Nietzschean (1964) notion of movement toward higher-orders of human development. A similar consonance exists with the teleological view of evolution expressed by Christian (1977) of advancing toward increasing complexity and qualitatively higher levels of life.

5.4.4. Issues in Measurement

An important point relevant to the issue of the measurement of ontologic joy concerns the appropriateness of the statistical process itself. A correlation coefficient (which has been the traditional index of criterion-related validity) may not accurately reflect a complex dimension. For example, "correlation coefficients are insensitive to linear transformations of one or both variables" (DeVellis, 1991, p. 45), simply because a score on the predictor measure is not an estimate of the criterion. Transformations of scores may be mandatory to avoid erroneous conclusion. Such error is most likely to occur "if the predictor happens to be calibrated in units that fall into the same range as the criterion" (DeVellis, 1991, p. 45). No attempt was made in this investigation to empirically determine the transformations required for any of the criterion-related validity scores. As such, all correlation coefficients can only be interpreted at face value. The caveat remains, however, that the similarity of numerical values of Avoidance of Joy Scale and the numerical values of the criterion (if interpreted without any of the possible required transformations) is likely to have nothing to do with the degree of validity within the Avoidance of Joy Scale or the theory of ontologic joy on which the scale was based. In other words, further computational work is required to determine the precise meaning of each finding. For example, the mere appearance of a statistically significant correlation only means that the distribution of scores bear some relationship to each other. With respect to the Avoidance of Joy Scale, it is noted that the overall mean of both the 40 item version (<8.00) and 20 item version (<4.00) are low. In a theoretical context, such mean levels imply that a large portion of the research sample were "approachers" of the phenomenon of joy. Such an interpretation in practical terms is essentially arbitrary. This is not to say that scores on the Avoidance of Joy Scale are reduced to meaninglessness, but rather to point up that the Avoidance of Joy Scale may only represent one facet of the construct of ontologic joy. Substantial evidence was presented in this investigation in support of the reliability and validity pertaining to the Avoidance of Joy Scale. However, interpretation of the findings presented must be understood within the context of the "data arising from a specific procedure" as Cronbach (1971) appropriately articulates.

A corollary of the matter of use of a correlational coefficient concerns the meaning of a correlation within the caveats of the properties of the correlation itself. Restriction of range, endorsement frequencies of the test items, and other similar factors coalesce together in ways that influence the magnitude of the correlation yielded. Within the context of measurement theory, it may simply be the case that a particular scale may be unsuited for evaluation of its validity properties within a specific distribution of data. Earlier the point was raised that a measuring instrument may be unsuited for assessment of certain phenomena. This point can be readily understood in the everyday form of the argument of "comparing apples to oranges," or through more exaggerated form in comparing apples to Fridays. The same reasoning, however, prevails when an attempt is made to assess a phenomenon across categories. In philosophical terms this is well-known as a category mistake. The reason for this type of error pertains to the possibility that a particular scale instrument may be an appropriate measure within category but not across category. Illustration of this can be readily inferred in considering the ordinary household thermometer as a valid measure of a specific range of temperature. The unsuitability of the household thermometer as a measurement of all temperatures, or more specifically a complete theory of temperature, or the construct of temperature in particular, is obvious. The construct validity of the household thermometer must be evaluated within the context of the specific procedure employed. While the example of the household thermometer may seem apparent, it is apparent only by virtue of understanding. Measurement of complex abstractions in the social sciences are often not so readily discernible.

A third point pertaining to the interpretation of the results presented in this investigation concerns the adequacy of the validity of the criterion compared. Little is known for example, about what influences determine a variable such as "automobile accidents." As well, the use of other scales (published or not) are typically perceived to be reflections of their title. The degree of reliability and validity of such measures may be suspect, and particularly suspect within a specific context of research, as well as within the context of a particular sample or distribution of scores. Illustrative of this point are the results of analyses presented in Table 4.16. Within these analyses, one presumes that a distribution of scores is representative of a continuum such as approach of joy (low score on Avoidance of Joy Scale) through to avoidance (high score). In some of the analyses presented in Table 4.16, the order of magnitude of the three groups (recoded into Low, Medium, High), categorized by level of scores on the Avoidance of Joy Scale, were found to be non-continuous with respect to scores obtained on the criterion variable. The question arises as to what meaning should be attached to a finding where a "medium group" shows a mean score value on the criterion variable that is lower (or higher) that the "low" (or "high") group? Is this reflective of curvilinearity, artifact, chance, or other anomaly? Should such findings be taken as disconfirmatory to the validity of the Avoidance of Joy Scale? The answer to these questions may be determined either theoretically or empirically, or both. Uncertainty in specific results, however, renders interpretation difficult. With respect to this investigation, the number of unclear results were few. Notwithstanding such findings should not be ignored. Unfortunately the answer(s) must remain in abeyance until further research can safely answer this issue with respect to uncertain results with respect to the Avoidance of Joy Scale.

Related to the above issue is a fourth point with respect to the criterion-related findings regarding the Avoidance of Joy Scale. This point pertains to the fact that a correlation coefficient does not reveal how many cases are correctly classified by the latent variable (DeVellis, 1991). Delineation of the influences affecting successful classification is an important component in understanding the validity of a construct as well as evaluating the measuring instruments used to assess the construct of interest. It may simply be the case that what appears to be an inaccurate classification of a particular individual may be found to be entirely accountable within a thorough examination of the individual whose responses have shaped the pattern of the results obtained.

A fifth point raised here concerns the process of data interpretation itself. Too little is usually known about the individuals from which scores on measuring instruments are obtained. The issue of this matter is illustrated in considering the example of question #13 (see Table 4.12) of the Avoidance of Existential Confrontation Scale, "Genuine personal relationships are: beneficial/futile." This item is scored for avoidance in the direction of the "beneficial choice." From a spartan point of view one can recognize why a choice of "futile" has meaning. However, the question remains: What kind of a person would choose "futile" anyway as representing his or her view? The choice of this item is particularly germane for three statistical reasons: 1) The two correlations are statistically significant, 2) the correlations are both negative for avoidance, and 3) the correlations were obtained on cross-referent samples. In addition, the choice of this item is germane for theoretical reasons: 1) the item on grounds of content is reflective of a common theme in the existential literature, 2) the choice of "beneficial" clearly implies reward, and 3) the choice of "beneficial" is connotative of goodness. Answering the question of "Why then is the correlation(s) negative viz-a-viz scores on the Avoidance of Joy Scale?" further underscores the paramount difficulty of adjudicating the validity of both instruments. Unfortunately the data necessary to uncover the path of occurrence of the specific correlations is not yet available and must await subsequent study.

A corollary of this point also concerns the issue of magnitude of validity coefficients. Guilford (1965) notes that validity coefficients typically hover between .20 and .40, with the majority occurring near the .20 end of the range. The majority of criterion-related coefficients in this research investigation were within proximity of the typical occurrence. The further question, though, arises as to the meaning of a plethora of small but statistically significant correlation coefficients. Such small relationships are evidence of an ingredient of a relationship between at least two phenomena; but that appears all, which is not much for this kind of test and effort extended. Robert Hogan's observation raised in his review of the Jackson Personality Research Form (PRF) for the Eighth Mental Measurements Yearbook (1978) underscores this point; in his adjudication, despite the impressive properties of the PRF and the research it spawned across some 10 years, the validity of the PRF still has virtually little demonstration (Hogan, 1978). Though more validity evidence now exists (Cronbach, 1990), in a larger context the rhetorical question still arises: What have we learned that is new about personality? Summarily, the theory of ontologic joy provides an adaptable answer in theoretical formulation, to wit: there is no reward in scale construction, the virtue of scale construction is its own reward, the progression of which is development. Though benefit is not expected in this endeavour, when it occurs it is both pleasant and good.

A further seventh aspect of distinction between avoidance of joy and avoidance of existential confrontation (as this conception is measured by the Avoidance of Existential Confrontation Scale) is that in the latter measure, the dominant (perhaps exclusive) feature is the spartan view of motivation. Such a spartan motivational system is not dependent necessarily on either joy as pleasure nor joy evoked from goodness. Related to this distinction is an additional potential difference between bipolarity of the latent variable functioning as a duality versus bipolarity functioning as a single blend. In the first situation, the functional perception for the individual is stereoscopic and remains that way throughout. In other words the individual's motivational pattern in the paradigmatic form is dualistic with one pole anchored by the 'strength of Caesar' while the other pole is anchored by the 'heart of Christ' (Kaufmann, 1960). Actions in this style can be viewed as the product of both merits and demerits calculated separately. In this style, the strength dimension would not be tempered by kindness, nor necessarily embedded with kindness, but delivered in spite of kindness even though kindness may result as depicted in Hamlet's reference to "I must be cruel in order to be kind." Such juxtapositioning of two important elements is apt to be considered paradoxical, and perhaps contradictory to some. A "bitter-sweet" property is clearly different to a compromise or tempered quality to someone's actions. It is in this sense then, that the expectation of reward can also operate in a dualistic fashion regarding joy. In this sense, joy is perceived in the context of no reward calculated separately from the experience of pleasure or happiness. Alternatively, the expectation of reward may be tempered through consideration of pleasure or happiness and still remain as goodness in value. This split in distinction, according to the theory of ontologic joy would only arise at higher-order levels of development. At lower-levels, joy would function independently as a value unto itself. At higher-order levels of development joy is experienced as one incident of experience, i.e., it is a property of state; while at lower levels of development, joy pursued as pleasure is experienced as a property of trait of a person. This distinction can be understood within the context of state versus trait differences, however with respect to the theory of ontologic joy, the properties of state versus trait are features of perception and motivational value rather than properties inherent to the condition of a particular individual.

A related aspect of a clear separation of joy from goodness versus joy as pleasure is somewhat self-evidential. This is to note, that this research investigation is relatively a new research area, a fact alone which serves as some testimonial that joy evoked from goodness is not the characteristic way in which joy has been assumed to exist previously. Were joy evoked from goodness considered to be the norm, then one might presume more literature might have existed on the topic. As noted earlier in the literature review, most of the research literature existing on the topic of joy concerns other directions about joy than that evoked from goodness.

5.4.5 Questions of Efficacy

Modern approaches to the study and application of principles of measurement have shifted away from the contrasted groups and empirical approaches toward a construct oriented methodology (Anastasi, 1988; Cronbach

1990; Feldt & Brennan, 1989; Messick, 1989). During the course of this investigation on the theory of ontologic joy, considerable emphasis has been placed throughout on identifying, evaluating, and augmenting the construct validity properties during the construction phase of scale development of the Avoidance of Joy Scale. A variety of statistical results have been presented which attest to the success of this methodological design with respect to the phenomenon of joy. Notwithstanding this success, the subsequent question remains as to what these findings about the construct of ontologic joy mean in real terms. The following discussion examines several issues of meaning that arise from consideration of the technical features of the Avoidance of Joy Scale, which is believed to reflect at least some portions of the construct of ontologic joy.

Especially germane to the meaning of the construct of ontologic joy are the critical elements contained within the theory of ontologic joy, which include the spectrum of approach-avoidance tendencies, the idea of goodness as a preferred value, the absence of reward, and the idea of development that is distinct from the concept of fulfillment. Although aptitude and ability figure into the course of development and are defining determinants of development, they still remain as simply attributes. In its fundamental characteristics, the theory of ontologic joy is attitudinal rather than a mechanical set of steps to deliverance. Within a literary context, ontologic joy is a myth, the meaning of which for each individual is one's own. There is no goal state to achieve, thus one never arrives, though in this perspective, one continues in the journey. Joy may happen, and often does in this journey in one's development, not from pursuit, but from circumstance. This is not to postulate that joy is simply a product of happenstance. An allegory of the phenomenon of ontologic joy can be likened to the concept of time. Time is not made, nor is it owned (except in the sense of its elementary features). In its common understanding one has time, and it, like joy is predictable. Such time is captureable in experience, and joy in such basic form is captureable as well through the maneuvers outlined earlier. As the experience of joy unfolds at higher orders of development, such predictability evaporates. One simply accepts that it may be or it may not; one does not expect is to be. At the more primitive level, joy is synonymous with pleasure and happiness. Such joy is manufacturable. At a much higher order, such joy when viewed retrospectively is joy that was "once upon a time." The joy of higher order is joy that is "twice upon a time."

Phraseology such as "joy that is twice upon a time" is not meant to be facetious. Rather it bespeaks of the problems in conventional measurement, which were highlighted in an earlier section of the chapter. The difficulty in measuring a construct such as ontologic joy is grounded at its more elementary levels. A sizeable amount of data was presented in this investigation which followed the classical model of measurement. The evidence supporting the construct of ontologic joy, taken as a whole, was deemed very respectable within the context of the criteria invoked regarding its features of validity and reliability. Such knowledge is information, but not necessarily, especially insightful. The criticism levelled against such measures as the Avoidance of Existence Confrontation Scale is founded in the plausibility that a true variant (i.e., a higher developed person of ontologic joy) may not and likely not score well on such a measure anyway. Within the limits of measurement in general, the same argument can be proffered in reverse, i.e., a "true variant" of existential confrontation may not score well on a measure such as the Avoidance of Joy Scale. This conundrum can be illustrated another way, which is "what if both measures are right." The possibility for this lies in the potentiality that both measures each identify only a small relationship, but that is all.

A second conundrum evolves from the reliance on criteria, though impressive in their power, are likely inappropriate for a science of a phenomenon with shifting foundations. In understanding the theory of ontologic joy, at times joy can be perceived as an incident, at other times as a phenomenon with continuity. The position was underscored in this investigation that the matter of measurement be taken seriously. Results of this investigation demonstrate that the construct of ontologic joy, despite its level of abstraction, was amenable to assessment through the variant of classic measurement model, i.e., randomly parallel tests. The problem, however, is that such measurement is only one aspect of the construct of ontologic joy. Ontologic joy in the first instance appears delineable within a classic framework of measurement. A shift in the basic properties of ontologic joy, however, is also postulated as one of the defining characteristics of the construct. In the applied sense, the Avoidance of Joy Scale was constructed using principles that capitalize on item-discriminant properties maximized theoretically at the 50:50 endorsement level. Some psychometric properties are facilitated through such procedure(s). Notwithstanding the value to such an approach, the "greater" insight into the construct of ontologic joy may well rest in the items eliminated in the first phase of the scale construction process - i.e., those with low endorsement frequencies.

Bridging the gap between the nomethetic and ideographic at the item level of measurement has not been satisfactorily mastered as yet within psychology.

Related to the issue of scale construction through procedures based on statistics of central tendencies is the imposed dependency on normalized samples of research participants. For example, reading levels of questionaire items are typically set at the grade six or grade seven level. While this level is obviously useful to tapping information from research participants whose cognitive complexity is at or near that level, the utility of such information for the discovery of new insights in human functioning is clearly limited, if not perhaps impossible. Ultimately the concentration on "average" exemplars produces a psychology of the average. This is not to suggest that "the psychology of the average" is not valuable in its own right, but simply to point out that is what it simply is and can be known as such.

A fourth matter of interest in this research investigation concerns the interpretation of results in light of the application of the theory of ontologic joy applied to items wherein the idea of goodness was not obvious in content representation. Although the results obtained from this application were very respectable, these results reflect a leaning of the data toward the pleasure-happiness aspect of joy. Neither the idea of goodness, nor the products of goodness are linguistically obvious in the provisional items. Data is currently being collected to further distinguish between joy-related activities wherein goodness is clearly described in the content of the item from joy perceived as dominately related to pleasure or happiness. For the present, this distinction remains outstanding as to what this aspect means to the full interpretation of the Avoidance of Joy Scale.

Included in the design of the ongoing research project described herein is provision for a new data sample with which to compare the items of the Avoidance of Joy Scale with respect to perceptions of higher-order values of joy as postulated in the general theory of positive disintegration, as well as the specific theory of ontologic joy. This data will assist further clarification of individual responses to joy as goodness versus joy as pleasure. Both concepts are not viewed in the theory of ontological joy as equivalent, i.e., whereas pleasure or happiness is a sufficient condition of joy (held to exist at lower-levels of development), versus the view that pleasure or happiness is neither a necessary nor sufficient condition of goodness, and thus is only a necessary condition but not sufficient condition of joy evoked from goodness. Because the provisional items used in the construction of the Avoidance of Joy Scale did not include obvious content specifically identified with goodness per se, the Avoidance of Joy Scale likely retains an unequal balance of content in favor of joy as pleasure and happiness as compared to joy evoked from goodness. The two concepts however, as noted above, are not interchangeable. Depending on the results of this new study, consideration may be given to a more direct reflection of goodness in the content of the questionnaire items. There are several hazards to such an approach, a major one being adding complexity to questionnaire items. Such a decision awaits the findings of the new research now in progress.

Lastly a fifth question might also be raised about the philosophy of no rewards. In the classic tragic view of life, the reward element is viewed as a contaminant to genuine self-sacrifice (Kaufmann, 1960). Is it desirable that such a philosophy be promulgated? Certainly, more needs to be known about the implication of that perspective. Perhaps there are a few things that might be engaged by individuals without expectation of rewards, but does it follow that most of human motivation be so idealized? In the framework of value systems, doing somethings for rewards may be beneficial to all of humanity irrespective of a particular person's style of value and motivation.

Related to the issue of reward expectation is the matter of scope of the human emotional system. Although stringent in its postulate of being free of reward expectation, the theory of ontologic joy bespeaks more to a thorough emotional development toward higher-order values, than to a static view of any specific goal state. Adherence to a narrow interpretation of value is apt to render the person as imbalanced. A distinction is made here between imbalance in development and the psychiatric perspective of being imbalanced. Simply put another way, the issue is whether an individual can progress to a higher-order of value without losing one's frailty, vulnerability, or child-like quality of engaging one's environment and the people and issues in it.

5.5 Limitation Issues

A persistent problem in research designs that use self-report indices as data is the susceptibility of retrospective bias (Eysenck, 1988; Schroeder & Costa, 1984). Although arguments exist that rebut some of the concerns about retrospection bias (Maddi, Bartone, & Puccette, 1987), in Eysenck's (1988) view: "only prospective studies can give truly acceptance evidence..." (p. 57). As retrospective bias was not assessed in this study, a caveat regarding interpretation of scores on the Avoidance of Joy Scale is necessitated until further research can be completed to fully assess the level of retrospective bias operating (if any) in the data.

Another limitation of this research pertains to using a split-sample (DeVellis, 1991) of research participants for both item selection and as part of the validity studies. Samples that are fully cross-referenced are preferred for such study. Although a full cross-reference sample is included in the study (i.e., the Standardization IV Sample), the number of cases is relatively small (N=35). Because of the pilot nature of the present research, the number of samples in terms of their respective sizes was considered adequate. Because this research is also a first systematic study of the scaling of the phenomenon of joy, major revisions in the material were thought to be possibly required depending on the outcome of the results. Even though the results were respectable and no major revision of materials appears indicated immediately, it was still necessary that the research project conserve resources. Cross-referent indices of psychometric properties are readily available from data collected in subsequent studies designed to assess other relevant factors to the construct under study than just the replication of the obtained reliability index. Thus this matter of using a larger cross-referent sample was not considered mandatory. As such, the results of this investigation were interpreted developmentally rather than definitively regarding the findings derived from the studies completed to date.

A related limitation revolves around the use in this investigation of extant data. As noted in Chapter IV, the theory of ontologic joy was imposed post hoc on the data used in the analysis. Although no significant complication arose as a result of this design, the content of the Avoidance of Joy Scale appeared to be more heavily weighted in terms of joy as reflecting pleasure or happiness than joy reflecting the concept of goodness. Notwithstanding the results of analyses demonstrated satisfactory evidence that the construct of antologic joy retains an appreciable level of the concept of goodness. A more precise delineation between the ideas of goodness and pleasure (as well as happiness) awaits further study.

5.6 Implications

Shrinkage of psychometric indices in the cross-referent samples (Standardization II) was anticipated. Interpretation of the results of the data analyses have taken this possibility into account. Restraint was exercised in searching the results of the data analyses for relationships that may have only appeared by chance. The research investigation does not purport to circumvent all the specific problems identified in the literature. Rather the design of the research is defensible in terms of modern strategies for scale construction and study of the construct of joy. Within the caveats noted earlier in this section of the investigation in mind, the design of the research was sufficiently strong to adequately answer the questions in this investigation. Accurate data is a major issue in the research on the phenomenon of joy. The success shown by the number and kind of results obtained represents a critical contribution to the research literature in the topic area of ontologic joy.

5.6.1 Issues Regarding Scope

As noted in Section 1.9, the scope of this research investigation was delimited to the joy component of the joy-sorrow continuum referenced elsewhere (Wallerstein, 1964) in the literature. Although consideration of the full spectrum of the joy-sorrow continuum would be of potential interest as to whether differences in response patterns exist for a positive emotion (joy) and an emotion considered negative (sorrow), there is no logical reason known which would indicate that exclusion of the sorrow component would have interfered with any of the principles or any subsequent inferences derived from the analysis of the data.

At some point, however, the conception that joy and sorrow as discrete emotions will need to be empirically scrutinized. Dabrowski (1970) has already anticipated this question in his analysis of the dimensions of joy wherein occasions arise where sympathy for others ("as sadness from the sadness experienced by others" p.111) is a factor mediating joy. While there is an aspect of joy derived from receiving temporary mental support from another (a Level II characteristic in Dabrowski's framework of emotional development), the question arises as to what description should be attached to the feeling(s) accompanying the provider of the support. The adage that it is "better to give than to receive" broaches this issue, but does not resolve it as Aristotle (1976) found. As well, there is apt to be a demonstrable difference between giving something in the sense of a gift to someone whose need is not great versus giving to someone whose need is magnified. This problem is complicated and at some later point, it might be necessary to untangle it.

A second delimitation concerns methodology. In this investigation, the scope of the validity studies was delimited to the major topic areas where a moderate amount of research literature already exists. The process of assessment of validity, however, is never fully complete, as every study in a topic area is a further test of validity of a construct (Campbell & Stanley, 1966; Cook & Campbell, 1979). Although the number of validity studies undertaken for this investigation was considered fully adequate to determine the initial efficiency of the procedures of scale construction employed in this investigation, a wide variety of other interests remain unexamined with respect to both the emotion of joy in general and the construct of ontologic joy in particular. A body of isolated research now exists with respect to the topic of joy which remains unintegrated with the findings of this investigation. Most of this circumstance arises because of research on the topic of joy is still at the infancy stage. Nonetheless, the integration of existing research must be undertaken. As well, several immediate research interests arise with respect to the construct of ontologic joy, which are discussed in the following subsection.

5.6.2. Further Research

Highlighted in the findings regarding substance use is the need for research which examines the relationship between avoidance of joy and substance use at different levels of development. Within the context of this research investigation, the exact level of development set out in the theory of positive disintegration in general, and the theory of ontological joy in particular, was unknown.

Determination of the level of development is an important next step in research on the validity of the construct of ontological joy.

A second important study would be the delineation of the points in the process of development where a shift from the pleasure dominate aspects of joy to the goodness dominant aspects unfold. Thus, study of the construct validity at each stage of development would assist validation of the construct as a whole.

Subsequent to investigation of the above-noted relationships, the degree of correspondence of avoidance-approach tendencies to joy and the external dimensions believed to be relevant to the construct of ontological joy should be further examined. Anticipated in this regard is a change in the degree of correspondence at different levels of development such that relationships occurring at Level I, for example, may not exist at higher-orders of development.

Further research could also focus on experimental manipulation of the dimensions of ontologic joy to test out relationships to critical elements of the construct. Several critical elements are contained within the theory of ontologic joy. It is unlikely that each element operates differently within the theory in terms of causal implications. Implications of the paths and linkages are apt to be different for the separate elements in the theory of ontologic joy.

5.6.2.1. Coping and adjustment. In as much as the results of this research investigation were consistently in the direction predicted by the theory of ontologic joy—the postulates of which, in turn, run counter to many of the basic tenets replete in currently popular approaches regarding coping and adjustment—the findings of this investigation bear upon the area of psychotherapeutic intervention. Of course, replication of the findings is mandatory. Notwithstanding, several problematic issues concerning current theories and models regarding coping and adjustment exist which were noted earlier in Chapter II. Within the context of those problematic issues, the results of this study provide a preliminary indication that some re-examination of the kinds of intervention strategies currently employed is in order.

A corollary of the above-noted need for re-examination involves a further issue which concerns the understanding the conception of the personality itself. In most textbook definitions, the idea of personality is conceived as a hypothetical construct of "the social stimulus value of the individual…as an integration of traits which can be investigated and described in order to render an account of the unique quality of the individual" (Chaplin, 1968, p. 356). Much of the research literature concerning personality has focused on the psychology of adjustment, though this component is only one part of the idea of personality. Within the concept of adjustment nonetheless, it follows that there be the ability to adjust. Conceptualizing the personality in terms of ability of the personality is clearly subsumed in the conjunctive idea of personality integration, which Chaplin (1968) defines as "the organization of the various trait systems that constitute personality into a harmonious whole resulting in effective adjustment" (p. 356-357). A breakdown in the integrative organization is conceived to result in personality disintegration and personality disorders. Although the literature in this perspective is both rich and abundant, the conceptualization of the personality in terms of the ability of the personality has received little emphasis. Perhaps out of reasons for respect of equality of individuals, distinctions in personality as to value are often articulated in such a way as to only infer that all persons have a personality and, thus from within an equality perspective, almost any personality will do. Despite the abundant and consistent evidence to the contrary, the ethic in operation regarding the personality appears to be almost one of "no value judgments please!"

It is not the intention of this report to enter into a debate on the merits and demerits of particular kinds and types of personality, for such an evaluation involves the thorough assessment and evaluation of the evidence from all disciplines. Notwithstanding, this paper approaches the matter empirically. Whether compared or contrasted in terms of adjustment, coping style, creativity, or any combination of the plethora of factors involved in the dynamics of personality, the idea that distinctions in personality exist among individuals is clearly subsumed in the concept of personality measurement itself. Classical measurement theory is intricately concerned with the mathematics of such distinctions, whether that be at the item level or within the conception of total scores, as well as the numerous possible combinations of scores on other variables. Clearly, the idea of discriminant validity is rooted in the understanding that distinctions among individuals not only exist, but are abundant.

Attaching meaning to such distinctions is of course another and separate matter. The conception of a hierarchical schema of personality development nonetheless implies that at some point, a thorough evaluation of the empirical evidence must be undertaken. Direction as to value of the adjudication of personality is clearly pointed within the theory of ontologic joy. As articulated in Chapter II, that direction involves two fundamental criteria: 1) no reward and 2) that the ideal of development of the personality is towards the higher-order in the sense of completion of the personality rather than fulfillment. Thus the phenomenon of ontologic joy, its development and expression, is not one of self-aggrandizement nor fulfillment of something as a reward for such effort, but rather joy that arises from the processes and activities involved in the completion of the personality across the lifespan from birth to death.

Facilitative of understanding the construct of ontologic joy is to conceive of the personality in ability terms of completing the process of development of each individual's personality. Uncovering the parameters of ontologic joy is thus the empirical task of scientific enquiry in general. In a specific sense, this research investigation has engaged the task from the perspective of construction of a scale to assist in the discovery and assessment of the implications associated with a motivational system based on a perspective of no rewards. Ontologic joy is thus joy without the expectation of reward. Within the theory, the manifestation of the construct of ontologic joy is operationalized in terms of approach and avoidance tendencies.

Conceptualizing the ability of the personality in terms of the expression of development perhaps can be easier understood in analogous form to intelligence. In the first instance, intelligence can be conceived as a personality trait. Though it is generally understood that the measurement of intelligence may be elaborate and traverse several hours of testing and assessment, somehow the same expectation does not exist for personality assessment.

A related point pertains to the use of information about personality. Little concern about the ability of the personality appears to arise in a society that considers one personality as valuable as another, except perhaps for the so-labelled "psychopathic personality." Ability of the personality generally receives little attention except in court proceedings. Few complications appear to arise in understanding or dealing with legal problems, yet "everyday" things about ability differences in personality seem to pose problems for some reason. A fuller understanding of the implications of this issue awaits further research investigation.

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APPENDICES

A.1 Provisional Items: Avoidance-Approach of Joy[*]

(n_1 = 528)

c 1. Festivity is okay.
c- 2. It is not important to have control over my feelings of joy.
a- 3. I would never want to engage in anything that would decrease my joy.
c- 4. I do not consider it important to be first-rate in generating feelings of gladness.
a- 5. I want to maintain a reputation among my friends for not being encumbered by feelings of weariness.
a- 6. I do not like taking the responsibility for my happiness.
a- 7. I do not intend to spend more time in exploring my feelings of joy.
c- 8. I do not desire the opportunity to justify to others my reasons for celebrating.
a 9. I am very slow in becoming aware of my delightful feelings.
c- 10. Happiness is not predicable.
a- 11. My life is not exciting at all.
c- 12. To me, sleeping is not the best enjoyment a person can have.
c- 13. To me, reading a good book is not the best enjoyment a person can have.
c- 14. To me, eating is not the best enjoyment a person can have.
c- 15. I would not convince myself that I was ill as an excuse to avoid attending some merriment.
a- 16. It would not be difficult for me to become ill rather than attend a place of merriment.
a- 17. It would not trouble me to tell my friends that I was feeling well rather than inform them that I was sad.
c- 18. I do not make fun, or light, of tragedies.
a 19. I am usually intellectual about enjoyment.
a- 20. It is not in my best interests to explore a topic such as utopia.
a 21. I am jubilant when someone discusses weariness with me.
a 22. I am comical when I am feeling sad.
a- 23. I do not find daydreaming pleasant.
a 24. I will go along with a certain amount of merrymaking so that others will leave me alone.
a 25. If weariness becomes threatening I solve it immediately.
c- 26. I do not try to forget those situations in which I have felt ludicrous.
a- 27. I pretend not to hear those who broach the topic of monkey business.
a- 28. I pretend not to see those who are whooping it up.
a 29. I usually want to know the reason for my feelings of joy.
c- 30. Friends are not particulary helpful in providing the answer for happiness.
c- 31. I do not try to hide my feelings of excitement from others.
A- 32. I would not hesitate to hide my feelings of joy from others.
a 33. I would go so far as to tell a lie to hide my feelings of rapture from others.
c- 34. Shopping doesn't counteract the doldrums.

c- 35. I do not usually put off opportunities to explore my feelings of gladness.
a 36. I prefer to forget about any funny feelings I might have.
a 37. There are more important things to do than to make merriment.
a- 38. I do not choose to be more aware of my excitement.
a- 39. I do not wish to read articles on joy.
a- 40. I have no interest in further exploring my feelings of jubilation.
a- 41. If this society was more lively, I would never have become weary as I am now.
c- 42. I do not procrastinate when it comes to taking a holiday.
a- 43. Exploring recreational possibilities is not my thing.
a 44. Something can usually be done to create joy and happiness.
c 45. I run into many refreshing experiences.
c 46. Sometimes I stumble upon factors affecting my life in joyful ways I never dreamed of.
c- 47. Dancing is not evil.
a 48. Casinos are disgraceful.
a- 49. It is never desirable to whoop it up.
a- 50. If given a chance for frolic, I do not usually take it.
a 51. There is a cause for the joy that occurs.
c- 52. If I am lucky enough to be happy, it is not likely to be because of God's will.
c- 53. Usually I do not avoid parties.
c- 54. In summing up my life I would say, "sometimes I am happy; sometimes I am not".
a- 55. There are not many times when I am amused at what I do.
a- 56. I have never taken an extended holiday.
c- 57. I do not avoid activities which are basically matters of fun.
a- 58. There are not many things in life that have amusement connected with them.
a- 59. Playfulness is not a characteristic of me.
c- 60. Joy is irregular.
a- 61. Joy doesn't often spontaneously appear.
c- 62. Play is not just for the kids.
c 63. A portion of my joy rests in my hands.
a- 64. Joy doesn't play an important role in my life.
a- 65. A life, which is without happiness, has no merit.
c 66. Much joy is possible.
c- 67. Rich people do not simply have more fun than others.
c- 68. Famous people do not simply have more happiness in their lives.
a 69. At times I fear that something pleasant is going to happen.
c- 70. I do not stay away from boisterous people.
c- 71. I do not desire to keep my happiness a secret.
a- 72. I do not have anything to say about my joy in life.
c 73. Most people have more influence over their happiness than they sometimes think they have.

a 74. Evil spirits have much say in the happiness of people.
a 75. Angels have much say in the happiness of people.
a 76. Supernatural forces are making me happy.
c- 77. I do not stay away from people who feel in the dumps.
c- 78. There is no explanation for some joy.
c- 79. I do not have all the necessary knowledge to assure my happiness.
c- 80. Droopy people do not depress me.
c 81. The best may be yet to come.
c 82. I am often delighted at how things turn out.
c- 83. There are no answers in the back of the book when it comes to happiness.
c- 84. My happiness is uncertain.
c- 85. I don't know all I need to know to preserve that which I find delightful.
c- 86. Most happiness is not predictable in advance.
a- 87. Joy does not appear in our lives, abruptly.
a- 88. I am not happy.
c 89. Happiness makes its own rules.
c 90. Joy has played a significant role in how I am where I am now.
c 91. Many friendships are the result of pleasant encounters.
c- 92. My happiness is unsure.
c- 93. I have no definite plan for my happiness.
c 94. Joy has played a significant role in how I got to be what I am now.
a 95. My happiness is being determined by the stars.
a 96. Mystical forces are at work determining my happiness.
c 97. Sometimes the weather is delightful.
a- 98. I would not take a holiday with a member of the opposite sex.
a- 99. There is not much fun in my life.
c 100. It is good to be reminded of the possibilities of unexpected joy occurring.
c 101. I sometimes say some rather humorous things.
a 102. Part of my joy is being shaped by the forces of magic.
c 103. My happiness often looks a bit bewildering.
c 104. I often feel happy spontaneously.
c 105. I believe joy is a necessary human emotion.
a 106. I have a right to expect others always to be jovial with me.
c- 107. I have no objection to feeling glad.
c 108. I believe it is important to accept the joy in others.
c- 109. I do not try to put off expressing my joy as long as possible.
c- 110. My values regarding fun are not dictated by society.
c- 111. I do not reject my playfulness.
c 112. In order to grow emotionally it is necessary to know what joy I feel.
c- 113. It is not necessary that others approve of my happiness.
c 114. I can trust my spontaneous joy.
c 115. I can cope with the honest merriment of others.
a- 116. Young children should realize that they do not have the right to banter with adults.
c 117. I can "stick my neck out" by expressing my joy.

c- 118. I do not believe the expression of joy is opposed to the interests of others.
c 119. I trust my ability to handle my delightful feelings.
a 120. I feel I must justify to others my reasons for expressing excitement.
c 121. There are times when just being happy is the best way I can express my feelings.
c- 122. I do not feel the need to defend my actions if I have felt amused.
c 123. Usually I feel free to show my joy with someone I love.
c- 124. Impressing others with my ability to be happy is not important.
c 125. I will risk a friendship in order to express my amusement.
c- 126. There is no need for me to avoid expressing my feelings of joy.
c 127. Often it is more important to express joy than to size up a situation carefully.
a 128. I feel free enough to live it up only with strangers.
c 129. I welcome criticism of my merrymaking.
a 130. Entertainment is absolutely beautiful.
c- 131. I don't mind people laughing at me.
a 132. I resent people who show off their happiness.
c 133. I am able to express my delight even when the result sometimes has undesirable consequences.
c- 134. I am not ashamed of my emotions of joy.
a 135. I am completely free of thrills.
a 136. I find it difficult to feel both joy and sadness at the same time.
c 137. I can express my glee regardless of whether others do likewise.
c 138. Others often make me laugh.
a 139. Monkey business is evil.
c- 140. I do not regret the times when I have felt the object of a funny joke.
c 141. I can feel comfortable with my own and others' ecstasy.
a 142. I have only been happy when it has been warranted.
a- 143. I would not make fun with a stranger that I really disapproved of, for I don't believe in sticking my nose in other people's business.
a- 144. I'm proud of the fact that I don't convulse with laughter like others do.
a- 145. I don't know what delight really is.
a- 146. I do not like people who are always cheerful.
a 147. If I feel ludicrous I usually slip quietly away.
a 148. I only show happiness with just cause.
c 149. Feeling joy and expressing joy can often help to promote healthier and happier communications with others.
c 150. A weary feeling can be the result of expressing joy.
c- 151. I would not try to prevent my friends from seeing me happy.
a- 152. I would not show any blissful feelings around my parents even though I felt these feelings.
c 153. I often sing a song of delight.
c- 154. I do not keep my happiness secret.
c 155. I give my joy a full free rein and expression.
a 156. I avoid losing control of my happiness.

a- 157. Delight does not get much expression in me.
a 158. I avoid little snickers.
c 159. Joy is necessary for love.
a- 160. It is always best to keep one's happiness a secret if you know there is someone present who wouldn't approve.
a 161. Happiness is only appropriate when completely justified.
c- 162. I do not try to justify my happiness.
a 163. I only feel happy in safe places.
c- 164. I do not apologize for my merriment.
c 165. I take full responsibility for my joy.
c 166. I laugh.
c 167. I believe that joy functions in the service of real closeness.
a- 168. Elation is not a good feeling to have.
a 169. I often question whether people even have a right to live.
a 170. There is usually a large lapse of time between when I first feel pleasure and when I show it.
a 171. My friends are too important to me to ever get serious with them.
c- 172. I'm inclined to think that not expressing my joy poisons me.
c- 173. I do not avoid people who use a sweet tone of voice.
c 174. All healthy people feel joy.
c 175. It is possible for a person to possess honest sad feelings.
c 176. It is possible that feelings of gladness can often be disguised as contempt for others.
c 177. I often use cheerful language.
a 178. Only fools allow themselves to get ecstatic.
a 179. I think too much of myself to ever stoop to monkey business.
a- 180. A good mother would never frolic with her children.
a 181. It is ridiculous to feel jolly about society.
a 182. It would be a disgrace to live it up with a devout member of the clergy.
a- 183. I have not been happy in at least a month.
c- 184. Ordinarily one should not try to hold down one's fun.
a 185. It is better to be rational, cool, and collected than to be ecstatic.
c- 186. I do not steer clear of ludicrous conversations.
a 187. I would hate to have any strong merriment feelings slip out.
a- 188. I never feel ecstatic with my friends.
a- 189. I never say anything humorous about others.
a- 190. I would never tell my boss that I was delighted with him or her.
a 191. Monkey business is too destructive to ever be indulged in.
c- 192. Joy should not be tossed out the door.
a 193. It is best to count to ten rather than to express one's elation.
c- 194. Monkey business is not my specialty.
c 195. It is good to have a laugh.
c 196. I often feel cheerful with my friends.
a 197. I prefer serious people.
c 198. I prefer vibrant exciting people.

a 199. During doldrums I usually try to act as a clown.
a 200. I prefer people who can really jazz it up.
a- 201. I am disappointed in people if they can't control their exuberance.
c- 202. I would not reject someone for getting exuberant.
c- 203. I am not shocked by people getting enraptured with something.
c 204. I often will try to be aware of the happiness in others and encourage them to express it.
c 205. I try to explore my own gladness.
c 206. I often dance and shout when I am rejoicing.
c 207. I would like to express more of my joyful feelings.
c 208. I find some people's expression of delight pleasant.
c 209. I will often risk exposing my internal joy to others.
a- 210. Joy is certainly not a basic human emotion.
c 211. Poor physical health could often be the result of difficulties in handling one's exuberance.
c 212. Pleasure is easily distorted.
c 213. War is often a distorted form of fun.
a- 214. In a healthy emotional climate, bantering would not be given much play or freedom.
c- 215. Joy is not only for saints.
c 216. It is fair to say that the sinners have happiness, also.
a- 217. Delight does not need to be expressed.
c 218. When I'm happy I just let the feeling be.
a 219. When I am glad I often frown.
a 220. When a sensation of ecstasy comes over me, I will usually take hold of myself.
a- 221. I would not express my feelings of joy simply and honestly.
a- 222. I would not express my feelings of happiness straight to another person.
a- 223. There are times when it is not appropriate to ever feel lively.
a- 224. I try not to show my joy.
a- 225. If someone is droopy with me I know they do not like me.
a- 226. Coarse people don't have real joy.
a 227. If one must get ecstatic then one should be polite and refined about it.
a- 228. I do not like the type of people who often laugh.
a 229. It is disrespectful to jazz it up around old people.
a- 230. I do not trust people who express their enjoyment openly.
a- 231. One should not stir up too much excitement.
c- 232. Frolicking should not be controlled.
c- 233. Happiness need not be forever mastered.
a 234. The expression of ecstasy is usually evidence of loss of control.
c- 235. Not feeling happiness is cheating yourself of the awareness of your feelings.
a- 236. I don't clown around because people would laugh at me.
a- 237. I never clown around innocent persons.
a- 238. There really is nothing quite important enough to feel happy about.
a- 239. I can't be bothered to celebrate.

a- 240. When faced with merriment it would be typical of me to say "I couldn't be bothered".
a- 241. One should not give in to tomfoolery.
a 242. I try to control my ecstasy by putting it out of my mind.
a 243. I would drink a cold glass of water to try and get rid of my amusement about something.
a 244. Pep pills are good aids for creating enjoyment in my life.
c- 245. I do not purposely try to forget my recreation.
a 246. When delighted I count to ten before letting out my feelings.
c- 247. It would not be typical of me to become happy with a couple of shots of liquor.
c- 248. I do not try to laugh off my seriousness.
a- 249. Even though particular persons might get other people to laugh they certainly will not succeed with me.
c- 250. I do not wait to feel gladness.
a- 251. I would not get angry at a person who is always clowning because I know such behavior is usually beyond their control.
c- 252. I do not consider it childish to clown around.
a- 253. One shouldn't clown around with children.
a- 254. One shouldn't play monkey business on one's spouse.
a- 255. One shouldn't play monkey business on those who mean well.
a- 256. One shouldn't play monkey business on officers of the law.
a- 257. One shouldn't play monkey business on retarded people.
a- 258. If I know that someone is neglecting something I will not live it up with him or her.
c- 259. I do not regard monkey business as being disgraceful.
a 260. I usually understand others' delight when they are happy and so I try to stand by on the sidelines.
c- 261. It is not good to bury one's jubilation.
c 262. I am capable of intense joy.
a 263. I prefer to give pleasure to others rather than feel happy about myself.
c 264. The exploration of one's joy has rarely resulted in its curtailment.
a 265. I try to deaden my frisky feelings whenever possible.
c- 266. I do not try to intellectualize my comicalness away.
a 267. By telling jokes I can usually escape an emotional pain.
a 268. People who get ecstatic need to be calmed down.
a 269. I get a feeling of satisfaction when I see others feeling droopy and in the dumps.
a 270. I save up many jokes.
a 271. Comics make good heroes.
c 272. The police feel happiness, too.
c 273. I can laugh at the fact that sometimes I get extremely excited.
a- 274. I would not give others the satisfaction of ever seeing me delighted.
c 275. Laughter is a universal human response.
c 276. Joy can be accompanied by feelings of pain and sorrow.

c- 277. I have my fun, fun doesn't have me.
a 278. Fun has me in its control.
a 279. Fun is the opposite of sensibility.
c- 280. Fun does not cancel out love.
c- 281. Joy is neither right nor wrong.
c- 282. Joy does not need a reason for being.
c 283. Laughter is a universal human attribute.
a 284. There is a time and place to be delighted.
a- 285. It is not feminine to be ecstatic.
a- 286. Gentlemen do not get ecstatic.
a- 287. It is not masculine to walk on air.
a- 288. It is inappropriate to play monkey business on a real lady.
a 289. Loud shouts of joy are evidence of psychiatric problems.
a 290. Good children know how to control their ecstasy.
c 291. Joy is usually healthy.
a- 292. I would not let anyone know that he or she had the effect of cheering me up.
a- 293. I never convulse with laughter.
c- 294. I do not try to inhibit the clowning in others.
c- 295. I do not expect others to deny their joy when in my presence.
c- 296. I would not hesitate to express my delight to a lady.
c- 297. I would not hesitate to express my delight to a gentleman.
c 298. There is much joy in my life.
a 299. I seem to be constantly in search for utopia.
c 300. I often say some funny things.
c 301. I sometimes give humorous replies to other people's questions.
c 302. Into every life comes a little joy.
c 303. Joy can rarely be totally eliminated.
a- 304. With punishment from others joy can not occur.
c- 305. There is no problem with joy.
c 306. I expect to be happy at times.
c- 307. It is impossible to be without some pleasure.
c 308. A small degree of happiness is always with me.
a- 309. If others fail to do meaningful things for me, joy will probably not develop for me.
c 310. The experience of joy is a condition of life.
c 311. I am aware of feelings of joy in myself.
c 312. It is desirable that my feelings of joy be given full expression.
c 313. My approach to joy is that it must be encouraged.
c 314. I generally let my feelings of joy achieve its own natural termination.
c- 315. There is no substitute for merriment.
a- 316. I will go to endless measures so I will not have to experience thrills.
a- 317. I often take whatever devious and circuitous pathways are available because I do not want to encounter with merriment.
c- 318. My personal failures can never keep me away from laughter.

c 319. I usually try to surrender myself to my ecstasy.
a- 320. I will often talk constantly to others so I will not encounter seriousness.
a 321. Modelling myself after high status people does wonders for making me happy.
a- 322. I have never been really happy.
c 323. Pleasure is part of being alive.
a- 324. When other people are not around me I do not feel happy.
c 325. Remaining in the company of other people does little to destroy pleasure.
a- 326. When I am alone I tend to have fairytale type fantasies because I do not want to lose my happiness.
c 327. Though at times merriment may be pleasant, it has some negative aspects.
c- 328. Pleasure can never be genuinely escaped from.
a 329. Marriage is a kill joy.
c- 330. Keeping myself active will not guarantee me happiness.
a 331. Happiness is promoted by being in the company of others.
a 332. I can draw on the fact that I am part of the universe to help counteract my indulgence in pleasure.
c- 333. I do not consider friskiness to be childish.
c 334. I accept my playfulness.
a- 335. I try to not enter into those situations in which I might feel frolicsome.
c 336. I defy my joy to do its worst.
c- 337. Happiness does not exist only if you want it to.
a- 338. I keep myself rational so that I will not float in the clouds.
c- 339. My humour is never far away from me.
a- 340. I pay no attention to gratification.
a- 341. If I can help it I generally will not encourage gratification.
a 342. If a person is droopy it is because that person wants it that way.
c- 343. I do not see joy as being just an emotional matter.
c 344. I am happy in mankind.
c 345. Whenever I am experiencing ecstasy, I just let the feeling be.
c 346. A good method of dealing with joy is to empty one's mind from other thoughts.
c- 347. The jubilant need not be muzzled.
a 348. An effective way of ensuring happiness is to belong to a worthwhile club or organization.
a- 349. Utopia has no merit.
c 350. I am submitted to my ecstasy.
c- 351. There is no plan available which will ensure happiness.
c- 352. There is no strategy which will ensure merriment.
c 353. I give full assent to my humour.
c 354. I rarely try to drum up joy.
a 355. I often pray for happiness.
a- 356. It would not be typical for me just to simply enjoy something without first seriously trying to see if it was for real.

c- 357. It is not customary for me to demand to know why I've been singled out for some pleasure.
a- 358. No one could say that I don't seek out pleasure.
a- 359. I cannot imagine myself remaining beside things that would remind me of luxury.
a- 360. I would not investigate situations in which I know I would jazz it up.
c- 361. I have no particular desire to avoid jazzing it up.
a 362. I will often seek out other people to talk to in order to reduce my lightheartedness.
a 363. If a chance comes for me to rebuff gratification I take it.
c 364. Even though I may act ludicrous in a particular situation I may enter that situation anyway.
a- 365. I would not join a discussion on utopia.
c- 366. It is not typical for me to withdraw from merriment.
a- 367. It is not profitable to feel enraptured with something.
a- 368. I often think up excuses for not exploring festive situations.
a 369. I take the responsibility for my joy.
a 370. In a discussion, I will sometimes initiate the topic of utopia.
a- 371. I cannot see myself entering into a humorous situation.
c 372. I usually attend whatever festive engagements I have even though I might have work to do.
a- 373. It is not good for people to feast and celebrate.
a 374. By doing something meaningful for others one can assure happiness.
c- 375. Caring for a spouse and family does not guarantee happiness.
a 376. A celebration must be arranged as soon as possible.
c- 377. Feasting is not something one should avoid.
a- 378. Happiness is the result of not avoiding others.
a 379. It is easy to be completely happy.
c- 380. Happiness in life can not be created by approaching other people.
c 381. It is good to examine one's joys.
c- 382. It is not beneficial to cover up humour.
c 383. Children should be taught to express their joy.
c- 384. A full an complete happiness with another can never be attained.
c- 385. There is no ultimate value to guide us towards happiness.
a 386. I often participate in work as a means of reducing my tomfoolery.
c- 387. Lightheartedness is not counteracted by working.
a 388. I use work as a means of restraining my desire to live it up.
a 389. If one is happy one can increase this considerably by approaching other people.
c- 390. Attendance at movies, plays, operas, etc., does not particularly help to increase real joy in life.
a 391. I attend movies, plays, operas, etc., to help increase my joy for life.
c- 392. Happiness in life is not increased by visiting with other people.
a 393. I often attend formal gatherings and formal parties in order to keep myself from really cutting loose.

a- 394. I try to avoid being by myself because I do not want to think I'm lighthearted.
c- 395. Ecstasy is not a bad word.
a- 396. If one is not religious, one will lack true happiness.
a- 397. If one is not deeply involved, one will lack true happiness.
c- 398. Religion is not a particularly useful tool for encouraging fun and frolic.
a 399. When one understands joy, it automatically appears.
c- 400. Science cannot remove pleasure from mankind.
a- 401. The more educated we are, the more unlikely it is that we will be without joy in life.
a- 402. The more committed we are to something worthwhile, the more unlikely it is that we will be without joy in life.
c- 403. I do not spend much time denying my happiness.
a- 404. One should not rejoice too much.
c- 405. The feeling of joy can not be transformed into something less pleasant.
c 406. One should be open to merriment.
c 407. It is best to let joy run its own course.
c 408. A poor way of dealing with glee is to think about something else.
c- 409. Ecstasy can not be completely understood.
c- 410. I would not try to prevent others from cheering me up.
a 411. If someone threatened me by trying to cheer me up, I might act confused to hold that person at bay.
c 412. I am the author of my own delight.
a 413. I am merely the victim of a joke.
c- 414. I do not evade those occasions that bring me happiness.
c- 415. I do not get angry at people who threaten me by livening things up.
c- 416. It is impossible to be sure what the outcomes of celebrating will be.
c- 417. There is no assurance that the outcomes of merriment will be all right.
a 418. My happiness seems to increase when I can give someone else credit for part of it.
a- 419. If one does not live properly, one is apt to miss out on joy in life.
c- 420. I would not disguise my elation as something else over which I have more control.
a- 421. I would not give away the gifts I have received from others even if they would give another person supreme delight.
a 422. Joy can be created with psychotherapy.
a 423. I often disguise my ecstasy from others by camouflaging it as my comical nature.
c- 424. Sometimes even thinking of something else will not prevent one from convulsing with laughter.
c- 425. I would not think of something sad as a means of stopping myself from feeling ecstatic.
a 426. In order to keep my antics down I often convince myself that I am really a more serious type person.
c- 427. I would not think that jazzing something up was degrading it.

a 428. I put myself above monkey business.

a 429. I am usually able to keep others from confronting me with living it up.

a- 430. If someone talks to me about ecstasy I do not usually participate.

a 431. With constant play, happiness can be created.

c 432. Hobbies can be very enjoyable.

a- 433. If one fails to get a job one likes, one is not apt to be happy in life.

a 434. Painting, decorating, writing, and music are poor activities for enjoyment.

a 435. If I sense that someone may threaten me with some monkey business, I leave that situation as soon as possible.

c- 436. Even when laughter becomes convulsive, there is no necessity to try and control it.

a- 437. I don't want to know about my charms.

a 438. The more I am like others I admire, the more glad I am.

c 439. The more I know about gladness the better.

a 440. By making many statements about happiness I am able to persuade myself that I am happy.

a 441. By pushing someone away, I am usually able to stop that person from threatening me with monkey business.

a 442. In order to prevent someone from involving me with some tomfoolery, I might try to push that person aside.

c- 443. I am unable to prevent joy from becoming pure bliss at times.

a 444. It is best to be serious about merriment.

c- 445. When I am ecstatic I do not find it discouraging to remember that few people are ever ecstatic in their life times.

a 446. There is one good approach to enjoyment.

a 447. When one is delighted it is best to be moderate about it.

a- 448. A joke should not be taken seriously.

a 449. There is a time and place for laughter.

a- 450. It is best not to remind old aged people of past pleasures.

a- 451. There are times when laughter should not be indulged in.

c- 452. It is not important that happiness be understood.

a 453. I shy away from jubilation because I have little faith that I can handle it.

a 454. I play down my feelings of ecstasy for fear of what the neighbours would think.

a- 455. I avoid some people because they never work.

a 456. I try to model myself after people who seem to be able to generate parties.

a 457. By keeping myself calm I am able to stay clear of ecstatic outbursts.

a 458. Merrimaking has complete control over me.

a- 459. I prefer to stay with others constantly rather than not have merrymaking when they are absent.

c 460. If I have the opportunity for a holiday I usually take it.

a- 461. It is not desirable to think about having pleasure.

a 462. I try to discourage others from whooping it up because I would want them to do the same for me.

a 463. We will be punished in the next life for the pleasure we have sought.

a- 464. The issue of utopia should not be discussed around children.
c- 465. It is not important to me that others know when I am feeling jolly.
c 466. I try to expose my happiness to others.
c 467. I sometimes seek out certain situations because they remind me of joy.
a 468. I find people who talk about utopia disgusting.
c 469. I very seldom want to get away from situations which are recreational.
c 470. The fact that I may experience joy has little influence in the way I direct my daily life.
c 471. I operate as if delight is only for myself.
a 472. Happiness is the reward for obeying a law.
a- 473. I am not yet ready to accept intense pleasure as being a part of life.
c 474. People should think more about pleasant issues.
c 475. I am ready for pleasure.
a- 476. I do not want to know what luxury is in store for me.
c- 477. Joy is unpredictable.
c 478. Happiness merely exists.
c 479. Joy should be allowed to do its own thing.
c- 480. Delight cannot be prevented.
c 481. I frequently feel delightful.
a- 482. I would not go to see a film on comedy.
c 483. It would be fine with me if comedy had more exposure on television.
a- 484. I avoid taking a trip by myself for fear of not being happy.
c 485. I try to remain in contact with my thrills even when it appears as if they are going to overwhelm me.
a 486. I usually explore other people's happiness rather than my own.
a 487. Life is superb.
a- 488. I do not like people who talk about celebrating.
a 489. I have the greatest admiration for people who talk about utopia.
a- 490. I do not investigate and explore things that are full of frolic.
a- 491. I would not watch a comedy movie.
a- 492. I would not leave a place for fear of leaving my happiness behind.
c 493. I am ignorant of what to do to promote real happiness.
a 494. I retain certain beliefs because they help me pass the time, and for that reason alone.
c 495. Even though I might feel a little sadness at a particular celebration, I would still attend the function myself rather than send someone else in my place.
c 496. What better word is there than the word joy to describe this feeling?
a 497. I keep my friends in order to feel elated.
c- 498. I do not get satisfaction in knowing that others are less happy than I am.
a 499. Promiscuity creates happiness.
a 500. Caring for a pet assures happiness.
c 501. I would visit an old folks home even though the people there frequently lack enjoyment in their lives.

c 502. I usually have little idea of when the beginning of a period of happiness will come.
a 503. Ecstasy is a most wearisome feeling.
c 504. I will go to great lengths to keep in contact with my humour.
a 505. I would prefer to generate other people's gladness before I dealt with my own.
c 506. I try to incorporate my joy into my life.
c 507. Friends would say that my humour is part of my life.
c- 508. Adventures where I am on my own are never too jolly for me.
c 509. I can live with festivity.
a 510. I give little thought to joy.
a- 511. I do not seek more contact with enjoyment in life.
c- 512. Staying clear of merriment is not important to me.
c 513. It is sometimes important to me to reconstruct past scenes which were very funny for me, in order to further appreciate them now.
c 514. I liven things up.
a- 515. Even though I have nothing in common with certain people, it is better to be with them and celebrate, than to stay away from them and perhaps not.
a- 516. I would not expose my true feelings of gladness to anyone.
a 517. It is good for one to be as far away from festivity as possible.
a 518. When I see someone who looks weary, I usually ask if I can cheer that person up.
c- 519. I don't especially care how jolly I may look to others.
c- 520. I would not spend much time comparing my degree of happiness with another's.
c- 521. I would not want to feel detached from my own excitement.
a 522. I have very little time for excitement.
c 523. Sometimes I weary from merrymaking.
a 524. I stay away from places of merriment.
a 525. A life of relaxation has little merit.
c 526. I am really more lighthearted than I sometimes think I am.
c 527. Life has joy.
c 528. Many things make me happy.

*
c = approach item: positively-worded
c- = approach item: negatively-worded
a = avoidance item: positively-worded
a- = avoidance item: negatively-worded

A2: Thauberger Satiation Scale

1. I am sick of these questionnaire items.
2. I am becoming fed up with these items.
3. I feel like quitting further completion of this questionnaire.
4. I definitely dislike this questionnaire.
5. These statements are tiresome.
6. This questionnaire is not very interesting to me.
7. I am not happy with this questionnaire.
8. I do not enjoy taking part in this study.
9. I am losing interest in these questionnaire items.
10. I am not finding much enjoyment in completing this questionnaire.
11. These items are sufficiently interesting to me.
12. I am happy to participate in this project.
13. I like completing these types of questionnaires.
14. I am interested in these questionnaire items.
15. The time I am spending on this questionnaire is okay.
16. I am not bored with these items.
17. These statements are not dry and flat to me.
18. I do not find this questionnaire dull at all.
19. I do not find these statements monotonous.
20. This questionnaire is not too long for me.

A3: Thauberger Avoidance of the Ontological Confrontation of Loneliness Scale

1. I do not consider it childish to feel lonely.
2. Keeping myself active will not keep loneliness away from me.
3. I do not try to deaden my feeling of loneliness whenever possible.
4. I do not reject my loneliness.
5. Loneliness is not something one should avoid.
6. Only fools allow themselves to become lonely.
7. Those who mean well rarely feel lonely.
8. Loneliness is too self-defeating to even be indulged in.
9. It is good for people to be as far away from their loneliness as possible.
10. I find people who talk about loneliness disgusting.
11. I am aware of loneliness in myself.
12. I expect to be lonely at times.
13. Loneliness is okay.
14. It is possible for a person to possess loneliness feelings while still being close to others.
15. Loneliness is part of being alive.
16. I have never been lonely.
17. It is unprofitable to feel lonely.
18. I can't be bothered to be lonely.
19. Happy people and contented people don't get lonely.
20. It is not good for one to be lonely.

A4: Thauberger Avoidance of the Ontological Confrontation of Death Scale

1. I have only been concerned about death when it has been necessary.
2. I do not wish to read articles on death or dying.
3. Pondering death or dying is not my thing.
4. I do not investigate and explore the things that remind me of death or dying.
5. One should not think too much about dying.
6. If I know someone will be frightened later, I would not remind them of death or dying.
7. There are more important things to do than to contemplate death or dying.
8. I do not usually put off opportunities to explore my feelings about death.
9. If I have the opportunity to explore aspects of death I usually take it.
10. I sometimes remind my friends about death.
11. I find some people's death pleasant.
12. I would like to spend more time exploring my feelings about death.
13. People should think more about issues involving death.
14. If I sense that someone may threaten me with the idea of my own death, I leave that situation as soon as possible.
15. It is better to be lively and cheerful than to worry about death.
16. I have very little time for contemplating death or dying.
17. I do not try to forget those situations in which I have felt that I was dying.
18. I do not steer clear of gloomy conversations.
19. I do not avoid things that remind one of death.
20. I do not try to put of thinking about the fact of eventual death.

A5: Ruznisky Rejection Scales

Rejection of Self

1. I try to understand these feelings of rejection I have toward myself.
2. I accept the fact that I am not always a good person.
3. It is not good to bury one's self-condemning feelings.
4. I will probably have these negative feelings about myself forever.
5. Even when others praise me, I still don't think much of myself.
6. I have a content, satisfied feeling regarding myself.
7. There is no need for me to avoid discussing my self-rejecting feelings.
8. It is best to let feelings of rejection toward oneself run their own course.
9. My life has been filled with sad, negative feelings and experiences.
10. It is not beneficial to think about my self-rejecting feelings.
11. In order to grow emotionally, it is necessary to know what self-rejection I feel.
12. I would not miss an opportunity to understand my self-rejecting feelings.
13. I can easily see why I am often rejected.
14. I never think good thoughts about myself.
15. I think the way I dress if fashionable.
16. Regardless of how I try, I still feel negative feelings toward myself.
17. Negative feelings toward myself do not affect me to the point where I cannot function.
18. It is not difficult to think of all the things that are wrong with me.
19. I am a good person.
20. Regardless of what happens, I never feel totally successful.
21. I wish my personality were different.
22. Conquering self-rejecting feelings is not my specialty.
23. The more I understand feelings of self-rejection, the better I feel.
24. It surprises me that I have any good friends.
25. Self-rejecting feelings do not control me.
26. I am not a good public speaker.
27. I do not take responsibility for the feelings of rejection I have toward myself.
28. Feelings of rejection toward oneself are not necessarily unhealthy.
29. If I had my life to live over again, I would do most of it differently.
30. Happy people aren't always accepting of themselves.
31. It is normal to feel some rejection toward yourself.
32. I don't consider it mentally unhealthy to have self-rejecting feelings.
33. I have very few good qualities.
34. Feeling rejection toward oneself is self-enhancing.
35. I do not think much of my abilities.
36. I am accepting of all my weaknesses.
37. I think that I am a dull person.
38. I am not physically attractive.
39. I can cope with my self-rejecting feelings.

40. I don't consider it a human failing to have self-rejecting feelings.

Rejection of Others

1. I avoid rejecting others because it may be hurtful to them.
2. No matter how I try, I find it impossible to reject another person.
3. If you chose to reject someone, it can be done in a nice way.
4. People should expect to always be accepted by others.
5. Rejection of another should not be done to make one feel good.
6. If I reject someone, they should not take it seriously.
7. The rejection I may show toward others is based on my own decision.
8. I am not afraid to reject someone because of one's private life.
9. It bothers me to think that I may have rejected another.
10. We have no right to condemn others.
11. It bothers me to be around people who have feelings of rejection.
12. I don't like to admit that sometimes I disapprove of others.
13. Disapproval shown toward others should not create guilt feelings in oneself.
14. If my first experience at rejecting another were negative, I would not be afraid to reject others in the future.
15. It is all right to reject somebody with adequate reason.
16. A good person would be accepting of everyone.
17. All people don't deserve to be unconditionally accepted.
18. One should never reject another, regardless of adequate reasons.
19. There are times when it is appropriate to reject another.
20. I am free to reject whomever I chose.
21. I accept everyone without question.
22. It is not nice to reject others.
23. I have not accepted others on various occasions.
24. I do not intend to approve of everyone I meet.
25. I would not reject another person.
26. I have never consciously rejected anyone.
27. I only reject others when I am angry with myself.
28. It is not disrespectful to reject another.
29. Rejection of others is not a worthless experience.
30. It bothers me to think of the pain I may have caused in rejecting another.
31. Rejection of others is a necessary fact of life.
32. I consider it a strength to have the ability to consciously reject another.
33. You would have to be a very mean person to reject another.
34. I will do all I can so that someone will not feel rejection from me.
35. Others who attempt to avoid rejection are wasting their time.
36. I don't feel it is wrong to reject another for whatever reason.
37. I would only reject another with just cause.
38. On more than one occasion I have rejected other persons.
39. You should not reject another, even if you do it in a nice manner.

40. When I reject another, I feel confident of my action.

Rejection by Others

1. Sometimes I worry that I say things that annoy other people.
2. I do not like to meet new people.
3. I often do things so others will like me.
4. It doesn't bother me that others may not agree with my opinions.
5. A good method of dealing with rejection is to fill one's mind with other thoughts.
6. I usually attend whatever engagements I have even though I might experience rejection.
7. Something can usually be done about the specific reason for being rejected.
8. When someone rejects me, I accept it for what it is.
9. Rejection from others doesn't seem that bad.
10. It doesn't bother me that others may be critical of the way I talk.
11. There are times when it is appropriate to be nice to others in order to avoid rejection from them.
12. There are times when rejection should not be discussed.
13. When I have been rejected I do not find it helpful to remember that everyone experiences rejection.
14. I try to imitate socially acceptable people.
15. I keep myself busy so that I don't have to think about rejection.
16. In some ways, experiencing rejection is beneficial.
17. It is important to confront one's feelings of rejection.
18. I am friendly to others in the hope that I will not be rejected by them.
19. I often think up excuses for not entering situations which carry a risk of rejection.
20. I do not go out of my way to impress others.
21. I sometimes worry that others may reject me.
22. It would not be difficult for me to become ill rather than go to a place where I may be rejected.
23. I think that the experience of rejection is definitely a worthwhile experience.
24. I do not let rejection from others alter my positive feelings about myself.
25. If I sense that someone will reject me, I avoid that person.
26. I cannot see myself entering a situation wherein I might feel rejected.
27. I try to think of the positive aspects when others reject me.
28. I am not ashamed of being or feeling rejected.
29. It is a social embarrassment to be rejected by others.
30. I really worry that I will not be treated well by certain people.
31. I consider rejection to be a valuable experience.
32. One should not try to cover up one's feelings of rejection.
33. I think others may be critical of me because of my background.
34. I could never attend a social function alone.

35. When rejected by someone, I try to learn from the experience.
36. I don't care if others are critical of my behavior.
37. It really bothers me to have someone reject me.
38. I worry that others may never approve of me.
39. I am willing to listen to another discuss his or her feelings of rejection.
40. I do not consider rejection from others to be embarrassing or degrading.

A6: Concurrent Validity Items: Example of Format

Please indicate how often you do the following activities. Use the scale below:

1. Never 2. Rarely 3. Occasionally 4. Quite often 5. Frequently

i. Joy

1.	Read articles on some aspect of joy.	1	2	3	4	5
2.	Talk to another about the joy I've had	1	2	3	4	5
3.	Initiate the topic of joy in a conversation	1	2	3	4	5

A7: Social and Health-Related Variables: Examples

1. Number of absences from work.
2. Infections requiring attention by physician.
3. Broken bones.
4. Automobile accidents.
5. Hospitalizations.
6. Surgery.
7. Visit to physician.
8. Home visit by physician.

A8: Inventory of Substances

How often do you use the following:

		NEVER	ONCE EVERY FIVE YEARS	ABOUT ONCE A YEAR	A FEW TIMES A YEAR	MONTHLY	TWICE A YEAR	WEEKLY	EVERY COUPLE OF DAYS	ONCE A DAY	SEVERAL TIMES A DAY
1)	alcohol	1	2	3	4	5	6	7	8	9	10
2)	tobacco	1	2	3	4	5	6	7	8	9	10
3)	tea (herbal)	1	2	3	4	5	6	7	8	9	10
4)	tea (caffeinated)	1	2	3	4	5	6	7	8	9	10
5)	coffee	1	2	3	4	5	6	7	8	9	10
6)	coffee (decaffeinated)	1	2	3	4	5	6	7	8	9	10
7)	junk food	1	2	3	4	5	6	7	8	9	10
8)	chocolate	1	2	3	4	5	6	7	8	9	10
9)	health foods	1	2	3	4	5	6	7	8	9	10
10)	amphetamines	1	2	3	4	5	6	7	8	9	10
11)	sleep medication	1	2	3	4	5	6	7	8	9	10
12)	marijuana	1	2	3	4	5	6	7	8	9	10
13)	hashish	1	2	3	4	5	6	7	8	9	10
14)	antidepressants	1	2	3	4	5	6	7	8	9	10
15)	tranquilizers	1	2	3	4	5	6	7	8	9	10
16)	vitamins	1	2	3	4	5	6	7	8	9	10
17)	mineral supplements	1	2	3	4	5	6	7	8	9	10
18)	PCP (angel dust)	1	2	3	4	5	6	7	8	9	10
19)	special supplements	1	2	3	4	5	6	7	8	9	10
20)	peyote	1	2	3	4	5	6	7	8	9	10
21)	LSD	1	2	3	4	5	6	7	8	9	10
22)	morphine	1	2	3	4	5	6	7	8	9	10
23)	cocaine	1	2	3	4	5	6	7	8	9	10
24)	mescaline	1	2	3	4	5	6	7	8	9	10
25)	heroin	1	2	3	4	5	6	7	8	9	10
26)	special psychiatric (such as haldol, halcion, mellaril, cholorpromazine)										
27)	aspirin	1	2	3	4	5	6	7	8	9	10
28)	codeine	1	2	3	4	5	6	7	8	9	10
29)	pain killers	1	2	3	4	5	6	7	8	9	10
30)	sniff solvents	1	2	3	4	5	6	7	8	9	10
31)	an elixir (for what ails you)	1	2	3	4	5	6	7	8	9	10
32)	laxatives	1	2	3	4	5	6	7	8	9	10
33)	antihistamines	1	2	3	4	5	6	7	8	9	10

34) antibiotics 1 2 3 4 5 6 7 8 9 10
35) nasal decongestants 1 2 3 4 5 6 7 8 9 10
36) cough medicine 1 2 3 4 5 6 7 8 9 10

A9: Inventory of Life Events, Experiences and Perceptions

Listed below are a number of things, life events, and human conditions which may according to varying degrees of intensity, cause stress, fear, concern, or upsetedness to a person. Please rate these items as to their relative degree of stress or concern to you personally.

In rating these items consider the following mechanics of rating: Item 1, Appendectomy (surgical removal of the appendix) has been assigned an arbitrary value of 500. As you complete this list consider whether each event, condition or thing is more or less stressful to you personally than an Appendectomy. If you decide the item is more intense, then choose a proportionally larger number and place it on the blank directly opposite in the column marked "VALUE". If you decide that the item is less stressful than an Appendectomy, then indicate how much less by placing a proportionally smaller number in the "VALUE" column. If the item is of equal intensity to an Appendectomy, record the number 500 opposite the item.

Please score these events, conditions and things according to your own personal reactions. Thank you for participating in this research.

	ITEM	VALUE
1.	Appendectomy	_____
2.	Serious illness	_____
3.	Terminal illness	_____
4.	Loneliness	_____
5.	Death of a spouse or mate	_____
6.	Snakes	_____
7.	Aging	_____
8.	Criticism	_____
9.	Disfiguration	_____
10.	Rejection shown to you from a loved one.	_____
11.	Minor handicap	_____
12.	Major handicap	_____
13.	Isolation from others	_____
14.	Fate (that things happen as they do to oneself)	_____
15.	Fate (that things happen as they do to others)	_____
16.	Responsibility	_____
17.	Death of a stranger	_____
18.	Injustice (done to you)	_____
19.	Drowning	_____
20.	Seeing another person being rejected	_____
21.	Change	_____
22.	Death of my father	_____
23.	Emptiness (feeling empty)	_____
24.	Rejection shown to you from your mother	_____
25.	Meaninglessness	_____
26.	To reject oneself	_____
27.	Death of one's child	_____
28.	Minor law infraction	_____
29.	Serious law infraction	_____
30.	Condemnation of oneself	_____
31.	Fired from job	_____
32.	Outstanding achievement (self)	_____
33.	Public speaking	_____
34.	Retirement	_____
35.	Condemnation of another	_____
36.	Physical pain	_____
37.	Rejection shown toward you from a stranger	_____

ITEM	VALUE
38. Boredom with spouse or mate	_____
39. Boredom with life	_____
40. Insects	_____
41. My own death	_____
42. Ridicule	_____
43. Rejection shown toward you from brothers and sisters	_____
44. Guilt over something not done	_____
45. Guilt over something done	_____
46. Purposelessness	_____
47. Rejection shown toward you by your father	_____
48. Aloneness	_____
49. Death of a brother or sister	_____
50. Height (high altitude)	_____
51. Suffering	_____
52. Injustice (done to others)	_____
53. Rejection by one's child	_____
54. Death of my mother	_____
55. Child abuse	_____
56. Confinement in prison	_____
57. Loss of personal freedom	_____
59. Emotional pain	_____
60. Anger	_____
61. Hostility	_____
62. Winning a big lottery	_____
63. Fatigue	_____
64. Shame	_____
65. Meeting one's ideal person	_____
66. Divorce	_____
67. Intense joy	_____
68. Loss of significant income	_____
69. Mortgage over $50,000	_____
70. Leprosy	_____
71. Rape of female know to you	_____
72. Rape of female unknown to you	_____
73. Kidney failure	_____
74. Minor heart attack	_____
75. Major heart attack	_____
76. Mastectomy of female family member	_____
77. Psychiatric illness (self)	_____
78. Psychiatric illness (family member)	_____
79. Psychiatric illness (acquaintance)	_____
80. Psychiatric illness (stranger)	_____
81. Major depression	_____
82. Lung cancer	_____
83. Kindness shown to you from a family member	_____
84. Kindness shown to you from an acquaintance	_____
85. Kindness shown to you from an acquaintance you dislike	_____
86. Kindness shown to you from a stranger	_____
87. Kissing someone you like in public	_____
88. Someone you like kissing you in public	_____
89. Being kissed by someone	_____
90. Full moon	_____
91. Receiving an expensive present from another who you did not buy a present for	_____
92. Receiving an expensive present from someone you like	_____
93. Receiving an expensive present from someone you don't want to become involved with	_____
94. Someone sexually molesting an elderly person	_____
95. Sexual molesting of a child by a family member	_____
96. Sexual molesting of a child by a stranger	_____
97. Stroke	_____
98. Brain tumour	_____

ITEM	VALUE
99. Need for neurosurgery	_____
100. Minor stroke	_____
101. Major stroke	_____
102. Minor, temporary paralysis	_____
103. Major, temporary paralysis	_____
104. Minor, permanent paralysis	_____
105. Major, permanent paralysis	_____
106. Situation of physical danger	_____
107. Situation requiring personal courage	_____
108. Situation requiring moral courage	_____
109. Truth that is unpopular with society	_____
110. Cemetery	_____
111. Gravesite of family member	_____
112. Gravesite for oneself	_____
113. Shortage of food for strangers	_____
114. Shortage of food for acquaintance	_____
115. Shortage of food for family members	_____
116. Shortage of food for oneself	_____
117. Eating alone	_____
118. Being without money while having more debts	_____
119. Ghosts	_____
120. Dieting	_____
121. Obesity	_____
122. Being a little overweight	_____
123. Being a lot overweight	_____
124. Someone exaggerating your qualities in public	_____
125. Testifying in court on major crime	_____

ITEM	VALUE
126. Fighting with serious words with another	_____
127. Displays of anger in public	_____
128. Someone yelling at you	_____
129. Yelling at another person	_____
130. Admonishment from one's work supervisor	_____
131. Alien creatures	_____
132. Bad odor	_____
133. The sweet odor of food	_____
134. Seeing someone severely drunk	_____
135. Temptation for a habit one is trying to break	_____
136. Tobacco smoke	_____
137. Jogging	_____
139. Making an acceptance speech for an award	_____
140. Cold weather	_____
141. Snow	_____
142. A lengthy rain	_____
143. Continuous high winds	_____
144. Having to make something creative	_____
145. Someone lying to you	_____
146. Telling a fib to someone	_____
147. Being stopped by a policeman	_____
148. The coming of the Lord	_____
149. Satan	_____
150. Sasquatch	_____
151. Big foot	_____
152. Being on a diet	_____
153. Sight of mouth watering food	_____
154. The food experience	_____
155. Blind date	_____
156. Being approached for money	_____
157. Speeding above posted speed limit	_____

ITEM	VALUE
158. Speeding on a freeway at 90 or more miles per hour	_____
159. Flying in a small aircraft	_____
160. Having a joke told on oneself	_____
161. People snickering at me	_____
162. Someone talking about me "behind my back"	_____
163. Having a joke told on another	_____
164. Going to a large family reunion	_____
165. Attending a major festival	_____
166. Someone trying to make a fool of me	_____
167. Falling off a diet	_____
168. Police following your car while driving	_____
169. Alcohol	_____
170. Tobacco	_____
171. Vomit	_____
172. Dirty diapers of family member	_____
173. Nausea	_____
174. Pursued by attractive member of opposite sex	_____
175. Pursued by attractive member of same sex	_____
176. Speaking on radio	_____
177. Speaking before fellow acquaintances	_____
178. Speaking at a conference	_____
179. Speaking on television	_____
180. Trying foreign food	_____
181. Finding ecstasy	_____
182. Cruise missile	_____
183. War with another country	_____
184. Accused of something you did	_____
185. Accused for something you didn't do	_____
186. Expressing affection to loved one in public	_____

ITEM	VALUE
187. Burnout (own)	_____
188. Winning of a game of chance	_____
189. Doing an intelligence test	_____
190. Eating alone in public	_____
191. Driving across a high bridge	_____
192. Going for a test for serious medical problem	_____
193. Being too tired	_____
194. Being jilted by a loved person	_____
195. Breaking up with a boyfriend or girlfriend	_____
196. Flying in a large airplane	_____
197. Horseback riding	_____
198. Being out in a storm on a lake	_____
199. Out in the woods alone	_____
200. Catching a big fish	_____
201. Riding horseback	_____
202. Sky diving	_____
203. Losing control of one's emotion	_____
204. Not enough sleep for more than two days	_____
205. Waking up in the morning by 7 o'clock	_____
206. Sitting for an important exam	_____
207. Power outage at home	_____
208. Being sued	_____
209. Visit a medical doctor	_____
210. Visit a psychiatrist	_____
211. Insomnia	_____
212. Going on a holiday	_____
213. Attending a funeral	_____
214. Getting married	_____
215. Going on the space shuttle	_____
216. Being evaluated at one's work	_____
217. Missing a regular meal	_____
218. Disciplining oneself	_____
219. Acne	_____
220. Epilepsy	_____

ITEM	VALUE
221. Having serious brain damage	
222. Loss of an arm	
223. Blindness	
224. Deafness	
225. Loss of a leg	
226. Not getting an opportunity to succeed in social circumstances	
227. Truth—minor issue	
228. Truth—major issue	
229. Being too thin	
230. Being too fat	
231. Courage of one's convictions	
232. Being afraid	
233. Wishy-washiness in oneself	
234. Wishy-washiness in others	
235. Moving to another city	
236. Going to work	
237. Seeing a loved one	
238. Seeing a loved one hungry	
239. Seeing a loved one sad	
240. Not having good clothes	
241. Being overweight	
242. A stranger smiling at you	
243. Someone abusing an animal	
244. Xeroxing 50 pages	
245. Reading a Romance novel	
246. Reading a book in psychology	
247. Reading a book in engineering	
248. A nuclear war	
249. A volcanic eruption of the continent	
250. A major earthquake within 100 miles of here	
251. Eating a bowl of strawberries	

ITEM	VALUE
252. Picking potatoes for 3 hours	
253. Being drunk	
254. Use of aspirin	
255. Use of heroin	
256. Use of marijuana	
257. Use of tobacco	
258. Use of alcohol	
259. Use of medication	
260. Flooded basement at home	
261. Blocked toilet in my own home	
262. World War II	
263. The Black Death	
264. World War I	
265. Glacier avalanche with significant loss of life	
266. Major earthquake with significant loss of life	
267. Fungicide poisoning with significant loss of life	
268. Nuclear reactor problems	
269. Poisoning in waste disposal	
270. Sinking of the Titanic	

A10: Directions to Participants

The information below is useful for statistical purposes only. Please answer these items by circling those numbers that correspond to you.

a) Age: _____
b) Gender: (1) female (2) male
c) Ethnic Background: (1) English Canadian (2) French Canadian
(3) Canadian Indian (4) Metis (5) other __________
d) Marital Status: (1) single (2) married (3) widowed (4) separated (5) divorced
e) Education: (1) elementary school (2) partial high school (3) grade twelve
(4) diploma (5) graduate studies (6) university degree (7) graduate studies
f) Number of Children: (1) none (2) one (3) two-three (4) four-five (5) above five
g) Religious Affiliation: (1) Catholic (2) United (3) Anglican (4) Presbyterian
(5) Mennonite (6) Mormon (7) none (8) Agnostic (9) Atheist (10) Other __
h) Geographical Background: (1) Urban (population above 10,000)
(2) Rural (population below 10,000)
i) Occupation: (1) professional (2) student (3) skilled labour (4) unskilled labor
(5) clerical (6) other __________
j) Average yearly income (self only): (1) less than $1,000 (2) 1,001-$10,000
(3) $10,000-$20,000 (4) $20,000-$30,000 (5) greater than $30,000

DIRECTIONS

The purpose of this project is to explore the issue of dealing with being alive. At this point we do not know which is a useful item to measure such a topic. As such, many possible items are presented. Statistical procedures will be used to assess each item, and those items which emerge with sound characteristics will be selected for further study. In order for this project to be successful, it is important that you read each item carefully, before responding.

In order to identify a useful item for examining life, it is important to select items that do not overlap with other issues that arise in being alive—issues such as death, loneliness, and rejection. Previous study has identified several useful items in the areas of death, loneliness, and rejection which are included in this project. Statistical procedures will be used on these other items to help select useful items in life. Other statements are included as a means of determining individual reactions to this study. As well, statistical procedures will be used to assess how such reactions may affect individual life items.

A quick glance through this booklet indicates there are several hundred items. So that no item is answered first by every participant, another item last and so on, individuals are requested to begin work at different parts of the inventory. Please begin your response on item number _____ and work to the end of the booklet. Then, return to item number one (#1) and complete each item to where you began. Upon completion of these items, please answer the last page at the end of this booklet.

Please answer every statement even if you are not sure of your answer. If a particular statement does not appear to apply to you, try to imagine yourself in that situation and answer either True or False. If an item appears to you to be both true and false for you, please pick one or the other according to the direction you are slightly leaning.